DOCUMENT RESUME

ED 327 722 CE 056 809

AUTHOR	Ostman, Ronald E.; And Others
TITLE	Adult Distance Education, Educational Technology and Drop Out. The New Zealand Technical Correspondence Institute's Management Courses. Studies in Education, No. 48.
INSTITUTION	New Zealand Council for Educational Research, Wellington.
REPORT NO	ISBN-0-908567-73-1; ISSN-0111-2422
PUB DATE	88
NOTE	199p.
PUB TYPE	Reports - Research/Technical (143) -- Books (010)
EDRS PRICE	MF01/PC08 Plus Postage.
DESCRIPTORS	*Adult Dropouts; Adult Education; Business Administration Education; Curriculum Development; *Distance Education; Dropout Attitudes; *Dropout Characteristics; Dropout Rate; *Dropout Research; *Educational Technology; Enrollment Influences; Foreign Countries; Higher Education; Multivariate Analysis; Potential Dropouts; Teacher Guidance; Teacher Student Relationship; Work Attitudes
IDENTIFIERS	*New Zealand

ABSTRACT

The New Zealand Technical Correspondence Institute studied the internal and external factors influencing adult students enrolled in a tertiary-level distance education management course to abandon their studies. A literature review afforded definitions of: (1) distance education; (2) educational technology; and (3) drop out. Although research has been conducted concerning dropouts, little research has been done on dropouts among adult distance learners studying at the tertiary level. An investigation was conducted using an exploratory multivariate analysis. Questionnaire data were collected from 724 respondents. Information collected included job commitments, reasons for enrollment and withdrawal from study, and study and work attitudes. Based on study findings, the following recommendations were made: (1) learners should be given clear expectations prior to study; (2) special assistance should be provided to dropout-prone students; (3) tutors and learners should increase contact; (4) tutors and learners should work together for the class duration; (5) curriculum review and student reinforcement should be constant; (6) student contact should be monitored; (8) participation in study should be flexible; (9) dropouts should be encouraged to reenroll; and (10) course content should reflect job requirements. (A list of 66 references, appendices containing management course information, the study questionnaire, 27 tables, and 3 figures are provided in the report.) (NLA)

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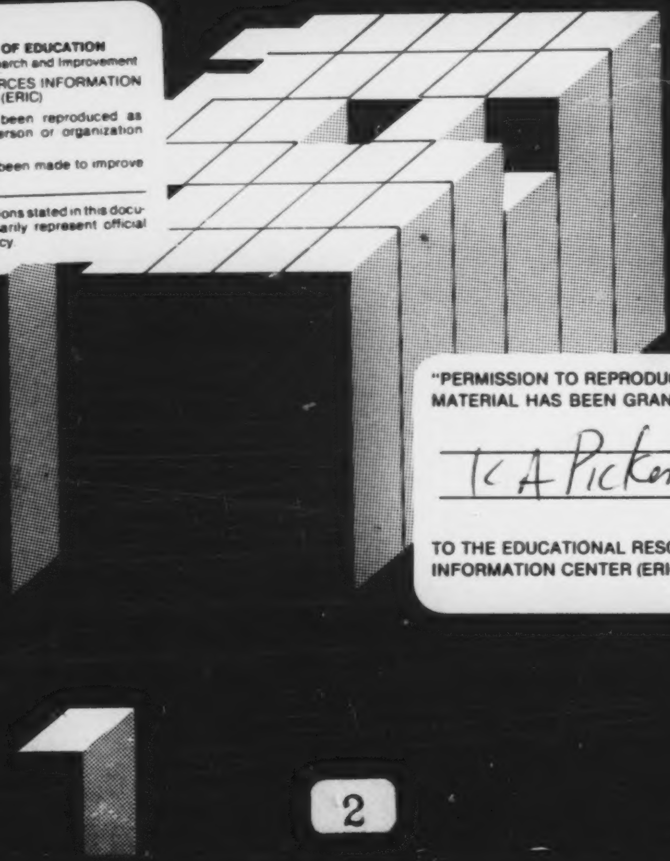

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ADULT DISTANCE EDUCATION, EDUCATIONAL TECHNOLOGY AND DROP OUT

THE NEW ZEALAND TECHNICAL CORRESPONDENCE INSTITUTE'S MANAGEMENT COURSES

Ronald E. Ostman, Graham A. Wagner
and
Harold M. Barrowclough

Studies in Education, No. 48

New Zealand Council for Educational Research
and
New Zealand Technical Correspondence Institute,
Wellington
1988

New Zealand Council for Educational Research
P.O. Box 3237
Wellington
New Zealand

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ISNN 0111-2422
ISBN 0-908567-73-1

Cover design by John Gillespie.

Printed by the New Zealand Technical Correspondence Institute,
Lower Hutt.

4

CONTENTS

FOREWORD vii

PREFACE ix

INTRODUCTION 1

- I. Background to the Research 1
- II. Basic Definitions 3
  - 1. Distance Education 3
  - 2. Educational Technology 6
  - 3. Drop Out 7

REVIEW OF THE LITERATURE 9

- I. Distance Education 9
- II. Educational Technology 15
- III. Drop Out 20
  - 1. Demographic Causes 22
  - 2. Social Interaction Causes 27
  - 3. Psychological/Intrapersonal Causes 31
  - 4. Institutional Causes 37
- IV. Summary 44

STUDY METHODS 47

- I. The NZIM Course 47
- II. The Sample 49
- III. Response Rate 50
- IV. Questionnaire Development 52

RESULTS 55

I. Characteristics of the Sample 55

II. Reason for Enrolling in NZIM Course 60

III. Methods of Study 63

IV. Tuition and Tutor Evaluation 65

V. Employment and Study 66

VI. Other Activities and Study 67

VII. Attitudes to Alternative Educational Technology 67

VIII. Assessments of NZIM Course 69

IX. Withdrawal from NZIM Course 70

1. Reasons for Withdrawal 71

2. Subjects Completed before Withdrawal 72

3. Subjects not Completed Before Withdrawal (and reasons for non-completion) 72

4. Overseas Travel as a Factor in Drop Out 72

5. Employment as a Factor in Drop Out 73

6. Return to Studies 73

STATISTICAL ANALYSIS OF FACTORS INFLUENCING PERSISTENCE OR DROP OUT 75

I. Bivariate Statistics 75

1. Demographic Independent Variables 76

2. Social Interaction Variables 80

3. Psychological or Intrapersonal Variables 80

4. Institutional Variables 82

II. Multiple Linear Regression Tests 85

MAIN FINDINGS OF THE STUDY 91

- I. Characteristics of NZIM Students 91
- II. Reasons for Taking NZIM Course 91
- III. Methods of Study 92
- IV. Satisfaction with Tuition 93
- V. Attitudes to Alternative Educational Media 93
- VI. Assessments of NZIM Course 94
- VII. Effect of Employment and Leisure Activities on Study 94
- VIII. Characteristics of the 'Dropout' 95

COMMENTS ON THE STUDY 101

RECOMMENDATIONS 104

- 1. Overview 104
- 2. Student Support 105
- 3. Tutor Support 108
- 4. Institutional Support 109
- 5. Employer Support 112
- 6. Examinations Support 112
- 7. Educational Technology Support 113

REFERENCES 117

APPENDICES 131

- A. NZTCI Management Course Information 131
- B. Part I: Letters 135
  - Part II: Questionnaire 138

C. Part I: Statistically Significant Bivariate Tables 158

Part II: Semantic Differential Mean Score Figures 186

TABLES

Table 1: Response to Mail Questionnaire 51
Table 2: Mail Questionnaire Respondents Compared with 40 Non-Respondents 51
Table 3.1: Respondents by Gender 55
Table 3.2: Respondents by Age 56
Table 3.3: Respondents by Gender and Age 56
Table 3.4: Respondents by Gender and Ethnic Group 57
Table 3.5: Marital Status of Respondents by Gender 57
Table 3.6: Respondents with Dependents by Gender 58
Table 4: Importance of Reasons for Enrolling in NZIM Course 61
Table 5: Positive Reactions to the Use of Alternative Educational Technology in NZIM Studies 68
Table 6: Explanations for Withdrawal 70
Table 7: Drop Out by Mode of Occupation 77
Table 8: Drop Out and Time Spent on Each Assignment 81
Table 9: Drop Out and Significant Attitudes to NZTCI Tuition 83
Table 10: Stepwise Multiple Linear Regression Model, Using Maximum R2 Improvement With Best Predictors From Four Predictor Sets (Demographic, Social Interaction, Psychological and Institutional) 89

FOREWORD

The New Zealand Technical Correspondence Institute was founded in 1946. Its first Principal Dr John Nicol established the structure of the institution and the form and standard of teaching. These were soundly based in theory and suited to the scope and practice of technical education of their day. In the intervening 42 years, the range, the level and the scale of technical education have increased greatly. The NZTCI now caters for 34,000 students each year studying from a range of 900 subjects. The institute's roll includes secondary school "Link" programme students, post-graduate diploma students, housewives in Hokitika, apprentices in Auckland.

When we write teaching material and organise tuition, we make assumptions about our student audience; their literacy, ethnicity, gender, educational attainment, motivation to study, study skills, need for information, and a host of other matters. Charles Callaghan (Principal 1983-88) set out to question some longstanding assumptions and systematically gather facts.

Co-operation between NZTCI and NZCER in distance education research began in 1979. As a first step toward matching TCI study material to the students' needs and abilities, Charles Callaghan initiated a joint NZTCI/NZCER research programme on the readability of NZTCI assignments. The final report, "A Readability Assessment of Some Technical Correspondence Assignments", was published in April 1980.[1]

By this time, Charles Callaghan was questioning why students of correspondence courses drop out. Clearly the difficulty of reading some course material could not carry all the blame. Studies of attrition and persistence in student populations have shown a variety of factors to be involved. Some of these factors must surely be within the control or influence of the institute. Charles Callaghan determined to identify real causes of drop-out so that they could be reduced or eliminated.

In May 1980 the rapidly growing field of management studies was identified as one where reliable data might be obtained and findings usefully applied. The assistance and co-operation of NZCER was sought once more and, despite tight budgets, was provided. The late Harold Barrowclough (then of NZTCI Business and Management Studies Department), worked with Graham Wagner of NZCER throughout the project.

The joint study was no magic mirror. It portrayed the strengths and the weaknesses of our work and indicated most clearly some ways in which our teaching can be made more effective. The study also revealed how little is still known about the student populations served by TCI. Some findings of the study have a wide application in distance teaching by correspondence, others are chiefly of assistance to tutors of management subjects.

Charles Callaghan was actively engaged in overseeing the publication of this monograph a few days before his death. It remains a fitting tribute to the spirit of the man and to those whose co-operation he so readily gained. Like him it examined the present and pointed to the future. We shall have to continue where he left off.

Evan I. Jones
Acting Principal
NZTCI

1 August, 1988

10

PREFACE

The impetus for the present study can be found in a May 9, 1980 letter sent by Mr Charles Callaghan, then Principal designate of the Technical Correspondence Institute, to Mr John Watson, then Director of the New Zealand Council for Educational Research. Mr Callaghan asked Mr Watson for NZCER assistance with "investigating and reporting on the reasons why there is a large withdrawal rate from study in (NZTCI's) management-type courses" (Callaghan 1980; Wagner 1982). This was seen as a natural extension of a longstanding working relationship between the two intitutions. NZTCI and NZCER had previously collaborated on workshops, seminars, conference planning, and studies on the suitability and readability of study materials in NZTCI assignments used by students in the engineering, commerce and general studies, agriculture and construction departments (NZCER 1979, 1980, 1981).

By 1982, plans had been made "to determine the need for and nature of, possible improvements in standards and methods of tuition" in the teaching of the NZIM Supervision Certificate and Diploma courses by NZTCI tutors (NZCER 1982). Mail questionnaires were prepared and sent in late March, 1983 to nearly 1,000 students who had enrolled in the NZTCI management course from 1980 through 1982 (NZCER 1983, 1984). Subsequent mailings and data handling are described in the methods section of this report. A preliminary report, based on completed returns was prepared in early 1984 and presented to NZTCI later that year. The majority of the work to this point was conducted by Mr Graham Wagner of NZCER.

Mr Harold Barrowclough represented NZTCI during the entire history of the research project and made significant contributions to the study design, questionnaire construction, coding of open-ended questions from returned questionnaires and the gathering of relevant data on non-respondents from NZTCI records.

Work on the final report was delayed as a result of leave granted to Mr Wagner to take up a 3 year appointment as the Fellow in Assessment and Evaluation at the University of the South Pacific in Suva, Fiji. Until he returned in January 1987 to complete the final editing and arrange for publication, the project was taken over for six months, from January 1986, by Dr Ronald Ostman a visiting NZCER Fellow from Cornell University, USA. Dr Ostman was responsible for further data analysis, reviewing relevant literature, and writing the first draft of the final report.

In August 1986, the task of editing the first draft of the report prepared by Dr Ostman was accepted by Dr Geoffrey Lealand, Research Officer with the NZCER from August 1986. His task was to reduce the length of the manuscript, convert textually-reported data to tables, shift some material to the appendices, and also rewrite parts of some sections.

Mr Wagner recommenced the final editorial process in March 1987 and sent drafts of the report to key NZTCI staff for comment. After their remarks had been incorporated in the manuscript the report was then sent to Mr John Panckhurst in October 1987 for an editorial review. Publication of the report was undertaken by NZTCI and NZCER in July 1988.

ACKNOWLEDGEMENTS

We have relied on a number of people to give us assistance during the course of the study. In the end the early editorial work done by Dr Lealand and the editorial review by Mr John Panckhurst were of considerable value in preparing the report for publication. Both contributions are hereby acknowledged and greatly appreciated by the authors.

Thanks are extended with gratitude for assistance during the conception, implementation and completion phases of this research to: Mr C. Callaghan, Principal; Mr E. Jones, Deputy Principal; Mr D. Nicholl, Second Deputy Principal; and Mr H. Hepple of the Technical Correspondence Institute. Additionally, thanks are also due to: Mr J. Watson, former Director; Mr I. Livingstone, Director; Dr D. Atmore, Research Officer; Miss Felicity O'Connor, former Research Assistant/Secretary; Ms Mary Kelly, former Librarian; and Miss Teresa Maguire Research Assistant/Secretary all of the New Zealand Council for Educational Research.

Our grateful thanks too to Mrs Gwen Kerr of NZTCI and Mr Peter Ridder of NZCER who undertook the painstaking and demanding task of preparing this manuscript for printing.

A special note of appreciation is extended to the 724 NZIM students who responded to our request for information on many aspects of their lives, attitudes and perceptions. We hope that their generosity in sharing information will result in improved education for future generations of distance education students.

Finally, we would like to acknowledge that the cost of this research was shared equally between NZTCI and NZCER, while Cornell University assisted Dr Ostman with sabbatical leave and salary. However, the responsibility for the report — its rationale, design, interpretation of results, conclusions and recommendations — lies with the authors.

Ron Ostman
Graham Wagner
Harrold Barrowclough.

INTRODUCTION

I. Background to the Research

The major research question which we sought to answer was: What factors influence adult students enrolled in a tertiary level distance education management course to abandon their studies? In a more applied sense, we asked whether there was something about the New Zealand Institute of Management (Inc) Courses, as offered by the New Zealand Technical Correspondence Institute, which played a part in students' decisions to leave their studies, or whether there were other factors, such as job or extracurricular activities, which might provide more insight into their decision to leave, or for that matter explain why they remained to complete their studies.

The Working Party on Continuing Education at a Distance, under the aegis of the New Zealand Department of Education in 1979, called for research on an "immediate and obvious question: What are the causes of students 'dropping out' from distance courses, and to what extent is 'drop out' a real measure of problems in distance education?" (James et al, 1979, pp. 115-6). We speculated that factors such as the following might account for completion or withdrawal: (1) social characteristics (e.g., gender, job classification), (2) work commitments (e.g., supervisory responsibilities, change of job during the course of studies), (3) personal commitments (e.g., recreational activities), (4) intrapersonal or psychological motivation (e.g., the perceived importance of working toward better career prospects), and (5) institutional characteristics (e.g., adequacy of mail delivery, turnaround time for comments on suitability of print as a medium of learning).

Tinto (1979), after an exhaustive review of over 100 research studies concerning drop out of "on campus" students, said it was unclear how much an individual's interaction in social groups outside the teaching institution might affect a decision about whether or not to persist in studies. However, distance education students are not "on campus" as they study from their homes and offices. Lewis (1973) noted that British Open University students have to discipline themselves to study, often at the expense of good relationships with friends, spouse or family. It is conceivable that others experiencing social strain as a result of their distance education studies might find it easier to withdraw.

Knox (1979) believed that critical life change (e.g., birth of a child, shifting from location to location, retirement) would have considerable positive influence on that individual's readiness to learn. However, it is possible that some changes in one's life (such as estranged social relationships) could have a dampening effect on ease of learning and influence withdrawal from studies. Knox argued that role changes throughout life ought to be studied as possible correlates to the learner's performance. Knox pointed out that there "has been very little research on purposeful learning by adults" (p. 62).

Levinson et al., (1978) were not concerned with adult education per se but their developmental study of men from their late teens to their late 40s gives useful insights. They believe that "market events" in men's lives (i.e., occasions which have notable impact, such as marriage), have a profound effect on choices and adaptation. Their theory suggests fairly precise ages for life cycle era and when taken into account with social interaction factors, may provide a valuable predictor of adults' decisions whether to continue or to withdraw from distance education studies. In a similar study, Neil (1981) pointed to the relationship of age and educational success. He noted that educators, in the absence of empirical research data, continued to debate whether or not distance education was advisable for individuals aged 16-20 years.

Relevant issues arise in other studies. One example, in a study by Bates (1983) of educational television in Britain's Open University, is the suggestion that a wide range of media should be provided for adult learners, because of individual preferences in modes of learning, and different learning styles. Bates advocates the use of multiple means of delivering information (print, TV, etc.) even if redundancy of course material results, because dropout can be avoided in this way. On the other hand, Postman (1973) seriously questions the value of television as a viable means of classroom education (and presumably of distance education as well).

How satisfied are students with print as the main media of communication between student and tutor? To what extent would they prefer the use of other media to supplement print? Are student perceptions of modes of communication related to decisions on whether or not to persist in distance education studies? Are there factors within the student or at NZTCI that operate against course completion? Access to what is known about distance education, educational technology and dropout in education might give some answers to these questions and at the same time provide new lines of inquiry for this study.

II. Basic Definitions

The review of literature which follows shows the depth and diversity of basic concepts relevant to this study. The various definitions which guided our inquiry are as follows.

1. *Distance Education*

It is clear that the historical, national and ideological perspectives of researchers and commentators have influenced their thinking on distance education. Terms which embrace distance education include: extended degree programmes (Feasley, 1982); home study, independent study, correspondence education (Holmberg, 1977); recurrent education (UNESCO, 1984a); continuing education, adult education (James et al., 1979); continuous education, permanent, and life-long education, open learning, independent learning, non-traditional studies, extension services, outreach and off-campus programmes, institutional and programme/open entry and open access (Neil, 1981); tertiary education (APEID, 1983); technical education, vocational education (McDonald and Livingstone, 1984); and so on. We find many areas of overlap and many levels of abstraction when we examine the meanings of these concepts.

At the broadest level is the concept of continuing education, defined as follows: " ... all forms and types of education pursued by those who have left formal education at any point and who entered employment and/or assumed adult responsibilities — however these may be defined in a particular society. Thus, continuing education might allow one person to complete a level of formal education, another to acquire skills in a new field, another to refresh or update his or her knowledge in a particular field, another to improve qualifications. Continuing education, while not necessarily restricted to programmes related to career or job considerations, is most often pursued with these in mind .... 'continuing education' may be organized within the formal educational system, given within specific programmes organized outside this system, or provided on a non-formal basis" (UNESCO, 1984a, pp. 22-23).

In New Zealand, continuing education is "for those who are no longer full time pupils within the primary or secondary school systems and ... may be full time, part time, extramural, on-the-job, vocational or nonvocational. Any adult over 19 years of age or anyone who has left school for at least a year is eligible for continuing education" (James et al., 1979, p. 5).

One type of continuing education is tertiary education, defined as "education beyond the secondary school level. It is provided by technical institutes and community colleges, teachers colleges, and universities" (APEID, 1983). Tertiary education often is oriented toward vocational education, that is "practical education of direct relevance to skills required in particular jobs" (McDonald and Livingstone, 1984, pp. 8-9). The same authors note that in New Zealand, "most of the jobs of the future (or at least the better ones) will require some kind of technological training ... (however) ... skill and experience are not all that is needed of a worker. The requirement of productive enterprises is for people who are cooperative, dependable, and resourceful" (pp. 53-4). Vocational training may be offered on-the-job, through institutions such as technical institutes or community colleges. It may be conducted with teacher and learner face-to-face or through some mediating channel. If the latter, use of various types of media is possible, as we shall see when examining educational technology.

McDonald and Livingstone (1984) have argued that less value is being placed on general, academic education in New Zealand at present, as a result of economic conditions which are at crisis proportions, the country having been affected by an energy shock, demographic changes and trading difficulties over the past decade. They believe that difficult economic conditions breed a greater demand for "relevant" education; that is, education which will assist a person at work and which will help to alleviate social/economic turmoil. Thus, vocational education is thought to be "the only sector likely to enjoy substantial growth in New Zealand in the immediate future." (p. 18). In this context, the concept of distance education is central.

Distance education has its historical origins in countries where learners could not attend centrally located schools or institutions where instruction was face-to-face. Various reasons account for this inability such as social or ethnic barriers and financial constraints (Holmberg, 1977). Physical separation between teacher and learner (James et al., 1979), and between learner and learner (Rebel, 1970), present a challenge to educational planners and implementors.

What is to be learned? How can it best be delivered to the student? What motivational and learning problems will the student face under isolated, solitary conditions? How can students best communicate back to their teachers? How can materials be kept up-to-date? Generally, distance education has stressed the need for greater planning and professional preparation and presentation of materials while, at the same time emphasizing the need to keep them as up-to-date as possible (Feasley, 1982). Various methods have been devised to create and maintain systematic, friendly interaction between teacher and student (James et al., 1979; Holmberg, 1981).

There are many complications for adults who wish to continue their education. There are jobs to perform, families which need time and attention, community responsibilities, psychological qualms about one's ability to successfully compete as a student again, and so on. Many of these complications operate against joining fellow students at a central location. As a result, some adults may choose to continue their education at a distance, an option which permits flexibility in study hours, sufficient time to master study material, and so forth. James et al., (1979) stressed that distance education need not be wholly hampered by physical isolation; that some face-to-face interaction can be arranged and will have

If face-to-face meetings are, impossible, other writers have stressed the learning support and practice which is possible through the use of interactive teaching methods which include not only print media, but also mechanical or electronic media (Moore, 1975). Such modes of communication used by teachers include: recorded communication using audio and/or visual media (for example, telephone, radio, audio cassette, videodisc, videocassette, television, computers). Students have also used these media to complete communication feedback loops (Wedemeyer, 1973).

Distance education is usually based on pre-produced courses which are designed to be self-instructional. These courses are sent to learners through relatively efficient and standardized channels. Assignments are made on an independent, self-motivated, and self-paced basis. Students utilise required and recommended materials which will help them to complete the assignments.

When the student feels he or she has mastered the material, the assignment is completed and returned to the supporting institution where a teacher or tutor evaluates and comments on the adequacy of the assignment or 'script' and communicates this appraisal to the student. A grade may, or may not, be assigned. The student may, or may not, be permitted to advance. The backbone of the system is a personalized communication process in which the student can expect to benefit from interaction with the teacher or tutor throughout the study period, regardless of what medium of communication is employed (Holmberg, 1981; James et al., 1979).

Distance education attempts to assist learners and bring about significant change in three basic realms: (1) the cognitive: acquisition of intellectual knowledge (Holmberg, 1981), and a defined body of content characterized by information and knowledge (McDonald and Livingstone, 1984); (2) the affective: involving emotions and attitudes (Holmberg, 1981; James et al., 1979); and (3) psycho-motor skills such as playing the piano (Holmberg 1981). However some types of psycho-motor skills do not lend themselves to distance education. Holmberg (1981) feels that while distance education is best suited to facilitate cognitive learning, it is also suited to affective learning.

Bligh (1977) argued that the major post-secondary objectives ought not to be solely acquisition of information, but also the development of patterns of thought, motivation and attitudes. He believed that information acquisition was necessary, but not sufficient. The majority of post-secondary vocational courses, for example, require abilities in problem solving, new situations, and application of productive thought processes.

The New Zealand Technical Correspondence Institute (NZTCI), accepts Holmberg's 1977 definition of distance education as "covering the various forms of study at all levels which are not under continuous, immediate supervision of tutors present with their students in lecture rooms or on the same premises but which, nevertheless, benefit from the planning, guidance and tuition of a tutorial organization" (Holmberg, 1977, p. 9; NZTCI, 1985). The term "correspondence education" often characterizes what NZTCI does; that is, it is dependent on "the systematic exchange between teacher and learner(s) of materials sent by mail." (UNESCO, 1984a, p. 32).

2. *Educational Technology*

Mass media of communication can play a large part in distance education. Telephones, radio, audio cassettes, videodisc, videotape cassettes, television and computers already have been mentioned. Also available are the traditional print media of books, pamphlets and other reading materials. Film, coaxial cables, wave guides, optical fibers, communication satellites, and a variety of software programmes employing stimulation and games, also may be used more extensively in the future. The list of available media and their capabilities in the service of education is growing rapidly (McDonald and Livingstone, 1984; Feasley, 1982; Siebert and Ullmer, 1982).

Collectively, these machines and programmes comprise what has been termed educational technology. Yet the term has meaning beyond machines and programmes alone: "Educational technology is a generic term classifying a diverse range of practical applications of scientific knowledge and refers as much to a concept as it does to devices ('hardware') and programmes ('software')". (Archer, 1974, p.202).

Archer refers to a "communications revolution", which requires the educator to systematically design, implement, and evaluate teaching and learning in the light of specific objectives based on research and combining both human and mechanical-electronic resources to bring about more effective instruction (p. 203). Hunt (1977) spells this out in more detail in his explication of educational technology: "... a systems approach to the teaching-learning process centering around the optimal design, implementation and evaluation of teaching and learning (CERI, 1971) ..... a situation in which technology assisted teachers in helping students to select goals appropriate to their needs; aided the recognition of the different ways in which people learn and, as a consequence, provided a systematic basis for designing experiences and selecting learning materials that gave individuals a better chance of realizing their maximum potential" (p. 74). This approach is endorsed in "Tutor", the bulletin of the tutor training unit. (New Zealand Technical Institutes, 1977).

3. *Drop Out*

In any system of education, students withdraw from studies before an official examination. Such students are often called "drop outs". UNESCO's (1984b) definition of dropout has been widely accepted: "Leaving school before the completion of a given stage of education or leaving at some intermediate or non-terminal point in a cycle of schooling" (p. 16). Sattar's (1984) definition of a dropout is very similar: "a child who enrolls in school but fails to complete the relevant level of the educational cycle" (p. 3).

In both definitions, it is assumed that school leaving is permanent (see Cope and Hannah, 1975). However, both UNESCO and Sattar used synonyms for dropout which have value-laden negative connotations. UNESCO referred to "school desertion" and Sattar speaks of "wastage". The term "dropout" itself is held by some to be pejorative. James et al., (1979), in defining dropout in the New Zealand context ("non-completion of courses or a person who fails to complete a course", p. 5), were careful to point out that their use of the term did not imply an adverse judgement on the person himself or herself.

Holmberg (1977) noted the difficulties in measuring the concept as defined. He argues that some students, whom he calls "self-actualizing", may not need to officially complete a course of study to achieve their personal goals. That is, they may have learned what they set out to learn. Does their decision not to continue beyond that point mean, therefore, that they have dropped out?

Bligh (1977) noted that many students did not intend to complete a degree, diploma, programme, or even a course at that time they enrolled. Other students may drop out temporarily, intending to continue later, a phenomenon referred to as "stopout" by Cope and Hannah (1975). Holmberg concludes that perhaps the only valid measure of drop out is when the objectives of an assignment are to be met within a specified period of time. Tinto (1975) prefers the more neutral term "leaving behaviour" as a definition of drop out. He further differentiates between academic failure and voluntary withdrawal, as well as between permanent and temporary decisions.

REVIEW OF THE LITERATURE

The following review of literature is in four sections: the first, an account of distance education with the focus on New Zealand and in particular the New Zealand Technical Correspondence Institute, its methods of delivery, its advantages and disadvantages, characteristics of its learners and teachers, and some projections as to its future; the second, the role of educational technology in such a future; and the third, a discussion of dropout. This is then followed by a short section that summarizes the literature review and gives further direction to the present study.

I. Distance Education: The New Zealand Technical Correspondence Institute

New Zealand, with a population of about 3.3 million in 1984, is a fairly homogenous society in which English is spoken almost universally as the first language. Only 16.4 percent of the population was rural in 1981, yet the New Zealand economy is heavily dependent upon the rural sector. Therefore, "New Zealand requires an educated and highly skilled rural workforce; distance education can help to meet this need and assist in keeping people and families on farms" (APEID, 1983, p. 11). Indeed, the original impetus for distance education in New Zealand came from the geographically isolated rural populace.

Until the end of World War I, many children were deprived of an opportunity to attend school. In 1922, the New Zealand Department of Education responded to parents' pleas by appointing a teacher to give tuition by correspondence to more than 100 primary school students (McVeagh, 1973; Rayner, 1949). The New Zealand Correspondence School grew from that initiative, initially for primary and secondary students in isolated communities or homesteads who could not get to a local school without living away from home. Although at first concerned only with school age children, the New Zealand Correspondence School has opened its doors to adults in recent years.

World War II, with its demand for teaching new skills and techniques to an adult population, in a short period of time, saw the development of distance tertiary education. Later, two major distance education institutions evolved in New Zealand to join the Correspondence School: Massey University's Centre for Extramural

Studies, and the New Zealand Technical Correspondence Institute (NZTCI) (Teather, 1978).

Since its beginning in 1946, NZTCI has grown rapidly. In the early part of its history, this growth was due to the fact that it was the only institution in the country which catered exclusively to adults in vocational education (APEID, 1983). Up to the early 1970's, NZTCI offered specialized courses, but the trend since then has been for a gradual increase in the number of courses offered and an extension of its role. At the same time distinctions between education and training broke down and the separation of vocational and non-vocational education was not made in the Education Amendment Act of 1974. This Act deleted the term "technical education" and replaced it with "continuing education", including "vocational education" (McDonald and Livingstone, 1984; Offenberger, 1979).

In 1971, NZTCI gained significant autonomy from the New Zealand Department of Education when overall management and financial control were vested in the New Zealand Technical Correspondence Institute Council. By the late 1970's, NZTCI had some 2,000 non-citizen students from 24 less developed countries enrolled for its courses. NZTCI tutors also represented a large number of nationalities. Among the tutors there was fluency in 12 languages, including nearly all Pacific and Asian languages (James et al., 1979; Kinsella, 1979, cited in Neil, 1981). Student enrolment had been steadily increasing since 1960. Courses were developed and upgraded continuously, (with Department of Education oversight) with an eye to matching the availability of technical education to the needs of the labour market (James et al., 1979).

Today, NZTCI continues to offer vocational education "for all students within the country who, for various reasons, cannot attend a class-contact institution; for all students residing overseas in countries where the New Zealand Foreign Aid Programme applies; for students residing overseas in special relationship countries and for overseas private students" (APEID, 1983, p. 27). NZTCI is not a degree granting institution, but it can grant local awards up to the diploma level, subject to validation by certificating authorities such as the Authority for Advanced Vocational Awards (McDonald and Livingstone, 1984).

Most enrolling students must be engaged (or about to be engaged) in a vocation relevant to the course of study and must be unable to attend a local course at an institution within 16 kilometres of their homes. Both conditions can be waived under special circumstances. For the New Zealand Institute of Management courses, however, any person over 30 years of age may study with NZTCI even though he or she lives within 16 km of a technical institute (there are 22 such institutes and community colleges). All students must be over 15 years to enrol (NZTCI, 1986 Prospectus).

In 1985, NZTCI was "easily the biggest single educational institution in the country", with 31,000 students, 500 full-time staff and instruction offered in 940 subjects (New Zealand Official Yearbook 1985, p. 247). NZTCI teaches one-third of all vocational students in New Zealand (New Zealand Official Yearbook, 1985). Approximately one quarter of the students study at craft level (mainly apprentices), while another quarter study for professional qualifications. The remainder study for various qualifications at sub-professional levels (APEID, 1983).

NZTCI co-operates with its New Zealand Government supported sister correspondence institutions and there is an effort not to duplicate services. The three major distance education institutions are considered complementary; all are largely government funded, non-profit institutions, following the same syllabus as conventional institutions; their students sit the same national examinations. Student achievement compares favorably with achievements of students elsewhere (McVeagh, 1976). All three use correspondence assignments as the basic teaching medium

This reliance on print media for instruction is justified by the population's literacy level. Only about 50,000 adults, or 4.6% of the adult population, are estimated to be illiterate (defined as a reading age of an average eight year old or below). International surveys have found that the standard of reading comprehension of New Zealand secondary school students is higher than that of other western countries (APEID, 1983).

Only the New Zealand Correspondence School broadcasts regularly by radio each day of the school year, reaching a national audience (Teather, 1978). Audio tape instruction and library postal services are widely used by the Correspondence School (including the Advanced Studies for Teachers Unit) and Massey University (McVeagh, 1976).

McVeagh (1976) stressed that the typical form of correspondence tuition provided in New Zealand is highly individualized: "It is a one-to-one relationship between teacher and the learner. The teacher establishes a close and personal link with the students. The returned script is always accompanied by a personal letter, note of encouragement, or commendation, as the case may be" (p. 84). In addition, NZTCI does arrange for occasional block courses for direct tuition from its own tutors. Seminars are also arranged and students are welcomed to the main offices in Lower Hutt to meet their tutors by special appointment.

Feasley (1982) has specified the variety of different methods which educators may use. James et al., (1979) noted that tutors in continuing education could use a variety of media in teaching, but that only the mail service "seems to be fully understood and used by (distance) educators." (AEC, 1985, p. 25). Experiments have demonstrated the clear benefits of appropriate uses of telephone and broadcast media, and other media also appear to have great potential application: two-way voice data and facsimile links, electronic mail, radio teleconferencing, and videodiscs (AEC, 1985). Yet a comparison of early New Zealand distance education methods (Nichol, 1950), and those methods used today in distance education, shows a remarkable similarity.

With a postal system as the major means of communication between tutor and learner, it might be thought that distance education leaves much to be desired. McVeagh (1976) wrote that time delays in communication between learner and tutor cause "serious" disadvantages. However, NZTCI states adamantly that distance education is effective and there is growing evidence that it is not a second-rate mode of instruction (NZTCI, 1985).

Various authors have listed disadvantages of distance education, including difficulties associated with set texts, books and reference materials (e.g., being out of date), and learner problems due to isolation, a sense of being under-informed, lack of self-esteem and self-confidence, pressures of other responsibilities, interruptions in studies, few opportunities to discuss their readings with fellow students or tutors, lack of literacy skills for some, etc. (Anderson, 1980; Feasley, 1982). However, these difficulties are often counter-balanced by the strengths which distance education students bring to their studies, including their strong positive attitudes and motivations (Sheath, 1972); their keen disposition to succeed, their self-control, their gratitude for help, their flexibility, their maturity and their capacities for organization (Anderson, 1980; Dunmore, 1983). As an example of this powerful motivation and will to learn, Johnson (1979) described a 34-year-old who went from total illiteracy to an ability to write a letter in 10 weeks of study, using audio cassettes and books. While Johnson noted that this student was exceptional, the fact remains that students can and do teach themselves basic literacy skills through distance education.

Not to be overlooked, are the opportunities which adults have to draw upon their personal, practical experiences, the freedom to set their own learning tempo, and the flexibility they have in adapting the study regime to their own routine (Rebel, 1970). Butchers (1950) also pointed to the advantages in permitting students to select their own subjects, the complete lack of coercion, detention, punishment and other negative reinforcers, the possibility of keeping up with their studies when sickness strikes (or at least the possibility to pick up where one left off, whereas in classroom situations, the work proceeds during the sick learner's absence), and the enhanced sense of responsibility, initiative and self-reliance which often accompanies successful study. Finally, there are pluses which accrue to individuals in being able to remain with family and friends during the study period, as well as the fact that many contagious diseases may be avoided due to reduced contact with others.

To these advantages may be added, the desire of distance educators to motivate their students and the careful planning which goes into the preparation and execution of distance education materials. Sheath (1972) argues that the bond between tutor and learner in distance education becomes a close relationship, while Feasley (1982) writes of the care which is taken in providing individualized feedback through clear, prompt and carefully written evaluations.

Characteristics of distance learners have not been empirically examined to a great extent. In 1979, James et al., noted that "little is known about (NZTCI) students ..." (p. 40), sentiments echoed later by Callaghan (1981), who called for more feedback from students. It is known that of all adults studying in New Zealand in the mid-70's, about one in six was doing so by correspondence. These students were basically voluntary, committed to their studies, self-directed, mature, independent, knew what they wanted to learn, and had developed their own study approach (McVeagh, 1976).

It appears that overseas studies provide the strongest basis for generalizing about distance learners. Holmberg's (1981) comprehensive summary, noted that distance learners were autonomous, not especially homogenous, typically aged 25-35 years, and upwardly socially mobile as a result of their studies. In some systems, distance education cut across social strata; in others, the distance education course represented a "second chance" for those left behind in earlier education. Distance learners tended to be goal-orientated. They stressed education as a means to a goal. However, older distance learners tended to learn as a means of widening general knowledge. Distance learners tended to have busy lives and as a result had less time than required for educational alternatives to distance education. About one-third preferred to study alone rather than in classes.

A 1979 study of 4,000 European distance learners found that 55 percent were male, 68 percent were ages 21-40 years, 9 percent were 41 years or older, and 65 percent had a secondary education. Few wanted study as a means of gaining social recognition, to escape their daily routine, or because of personal problems. Nearly two-thirds (63 percent) said they liked studying alone (Flinck, cited in Holmberg, 1981). A strong characteristic was their belief in occupational objectives. They saw their studies as preparing them for occupational change and advancement. This was true of distance learners in developing countries as well (Holmberg, 1981).

Knox (1979), in exploring adult development and adult learning, noted a slight decline in successful participation in education with increased age. However, individuals of a higher educational level were more likely to be self-motivated in seeking information from both print and electronic media. The higher the educational level of the adult learner, the more successful his or her participation in education.

Observers in New Zealand distance education have been quite optimistic about its future. None believe it will remain unchanged from what it is today. James et al., (1979) believed that correspondence teaching accommodates needs which cannot be met with other education alternatives. Widely scattered demand for courses, family commitments, work commitments and other factors which rule out classroom education have all combined historically to produce increased enrolments.

McDonald and Livingstone (1984) outlined five factors which they say New Zealand commentators agree will affect New Zealand's educational future: (1) reduced population growth; (2) increasing ethical and cultural diversity; (3) reduced employment opportunities; (4) poor economic prospects; and (5) growth of information technology, such as computers, coaxial cables, wave guides, optical fibers and satellites, which will affect the location in which the educational process takes place. Essentially, these information technologies will increase the possibility of long-distance interaction between learner and tutor and will reduce the amount of time necessary for feedback to occur.

These authors offer a personal prediction concerning the future of tertiary education: " ... resource constraints will hamper attempts to bring about an increase in participation rates, and the objective of 'universal' tertiary education will prove unattainable. University rolls will remain static or even decline, but there will be an attempt to cater for diverse educational needs in technical institutes and community colleges under the general rubric of 'continuing education'. The 'vocational' vs 'non-vocational' distinction will prove hard to erase. Economic pressures will mean that the 'user pays' principle will be adopted increasingly in courses which are deemed to be for personal enrichment, and not specifically aimed at productive employment" (p. 45).

II. Educational Technology

Holmberg (1977) noted that the printed and written word is the commonest means of communication in distance education, followed by radio and telephone and cassette tapes. However, the use of radio and television is gradually increasing. Holmberg forecasted expanding use of material recorded on video tapes.

In New Zealand, Wagner's (1980) study of the readability of Technical Correspondence Institute assignments led him to conclude: "...written language (the major medium of instruction at NZTCI)... may not be the most suitable medium for some students seeking tuition in New Zealand educational institutions. At the present time the Maori and Pacific Islanders 'have an oral tradition in learning and are sorely disadvantaged by the emphasis our culture places on the written word. ... In addition, there is evidence ... to show that some school children and teachers college students prefer complementary methods of learning (e.g., audio visual presentations). Consequently, it is recommended that more audio tapes (in the first instance) be used as complementary and supplementary means of supporting the written word in NZTCI home study materials. Later, it may be possible to expand this development into audiovisual presentations using slides, pictures, drawings and algorithms, especially in areas where difficult concepts and principles warrant perceptually variable teaching methods." (p. 27).

The principal of NZTCI, Mr. Charles Callaghan, in a 1981 article which cited Wagner's research, noted that slowness was a major difficulty with print transmitted by post and that the best a student could expect, under ideal conditions, was the return of a marked assignment in one or two weeks. Callaghan recognized that newer education media could improve NZTCI's teaching methods, but doubted whether media such as television could replace print. He called for more research, including a cost-benefit analysis, into the educational effectiveness of the new media. Such comments from practicing distance educators underscore the need for more knowledge about distance education learners and their perceptions, and possible use, of the various educational technologies and the mass media.

A study by Beijer (1972) showed that students in the earliest years of their correspondence school education were more eager to have print supplemented by oral communication than were older students. University students in France who were studying law, literature, and technology in nontraditional ways were asked by LeFranc (1979) to report on their actual use of various media and the value they would place on them if they were freely available for study purposes. The findings showed above average use of, and preference for, books and textbooks, mimeographed materials, sound documents, workshops and controlled university work. Radio programmes, university courses, one-day seminars, and television programmes were below average in use and preference. LeFranc concluded that students wanted an "harmonious equilibrium between the pedagogical components without any predominance of any particular one" (p. 104).

One of the most comprehensive studies of student perceptions of various approaches to adult distance education was carried out in New Zealand by Salkofeske, Teather, McKerracher and Carr (1977) on practicing teachers and allied professionals undertaking a course on behavioural modification offered in two locations, Dunedin and Invercargill. Twenty six students began the University of Otago teacher extension course in Invercargill. The Dunedin course was taught using a long distance telephone link, permitting the group to hold conversations with the tutors. Tutors visited the group at the beginning and at the end of the course to conduct seminars. Students also had homework exercises. Both groups received the same audiovisual programmes and workshop experiences.

The two groups were compared and found to be similar in age, sex, teachers vs. allied professional distribution, prior knowledge of behaviour modification, and employment fields. Attendance throughout the course was slightly more than 80 percent for both groups. Attrition was comparable in both groups, the Dunedin course losing five students (19%) and the Invercargill course losing eight (24%). The courses were evaluated at the end and a final examination was given. There were no significant differences in achievement between the two groups which led Salkofeske et al., to conclude that "relative lack of direct personal contact with tutors did not affect the amount learned" (by the Invercargill group) "as measured by the post-test" (p. 15). However, the final exam measured knowledge of the audiovisual programme only.

The course evaluation turned up the following significant differences between the two groups: the distance group were less positive about the usefulness of the course and the effectiveness of the behavior modification; they found the audio cassette recordings and the audiovisual material to be "about right"; they wanted more contact with the lecturers; they found the telephone seminar the least effective teaching strategy and criticized it soundly on the basis of the technical quality of the sound together with the uninteresting, lengthy, tutor-dominated sessions. The authors felt the technical problems with long distance telephone seminars could be corrected. They also felt that changes could be made in promoting more effective two-way communication with the telephone; simple changes such as using smaller student groups, coaching tutors in brevity, providing more telephone seminar experience to tutors and students, and allowing the novelty.effect to wear off through repeated use.

Similar empirical studies have been conducted, comparing various educational technologies with one another or with traditional classroom education, to see if there were clear advantages for one approach or another, as measured in student achievement. For example, Archer (1974) noted that studies which compared programmed self-instruction with the live teacher typically showed no difference between the two strategies. However, Holmberg (1968) reported that linear and branching teaching programmes have not had much success, because students saw them as bulky and boring. A comprehensive review of 421 comparisons of instructional television with traditional instruction concluded that students of all grade levels learned equally well in nearly every subject regardless of medium. But younger students favoured instructional television over traditional instruction (Chu and Schramm, 1967).

In New Zealand, the major user of alternative educational technology is likely to remain the Correspondence School, with its regularly scheduled radio broadcasts to distance students. However, the Salkofeske, et al., study, and another one by Long and Povey (1982), suggests that further testing of the effectiveness of alternative educational technology would be fruitful. Long and Povey demonstrated that off-campus psychology students at Massey University taught using audiotaped course material produced "significant improvement in their final grades, when compared with the results of their peers who did not utilize the tapes."

Given its present financial strictures it is unlikely that Television New Zealand (either by its own decision or through prodding by the BCNZ) will venture into the field of educational television. However, the Report of the Royal Commission of Broadcasting and Related Telecommunications in New Zealand (1986) contended that in the areas of extramural, continuing education and vocational retraining courses, "television has its greatest opportunity to contribute to the process of lifelong education ... the key, lies, it seems to us, in effective liaison and consultation between broadcasters and the education institutions". The Royal Commission pointed to the work of Radio New Zealand's Continuing Education Unit as a desirable model for developing new media related strategies.

The Department of Education in its submissions to the Royal Commission suggested that educational television could adopt the example of radio, with its use of pre-recorded audio cassettes for individual learning: video cassettes would be a better tool for learning than broadcast television. Submissions from the Correspondence School, however, argued that broadcast educational television was more desirable for their distance students "because whilst most correspondence school pupils had television sets, not all had video recorders." Nevertheless, with video recorders in 21 percent of New Zealand households in July 1985 (Broadcasting Corporation of New Zealand BCNZ IRIS Research), it is now feasible for videotapes to be used for distance education.

McDonald and Livingstone (1984) noted that most New Zealand homes have television sets, radio sets and telephones, and many have audio tape recorders which are capable of audio cassette playback. These authors did not foresee rapid adoption of microcomputers, video display units, video tape, video disc or microfiche display in domestic settings, but suggested that libraries might be encouraged to equip themselves with this technology. They thought cable tv did not have as much promise as satellite dishes or video tape/discs for educational purposes. Future educators, they thought, might specialize in designing and producing educational software for use with the new technology.

Still, there is no doubt that the bulk of distance education in New Zealand has been accomplished so far using "low to medium" technology, primarily the print media as transmitted by mail, supplemented by radio, audio cassette, telephone, and personal contact (Brice, 1983). The future, however, might be quite different. The "Working Party on Continuing Education at a Distance" (New Zealand Department of Education, 1979) called for a broadening of media used in distance education (James et al., 1979) but, in the meantime, New Zealand's educational system, in common with the rest of the world, will probably continue to live "in the 'Guttenberg galaxy' wherein reading and writing continue to dominate" (Malitza, 1984, p. 119).

Increased use of new technologies is likely to centre on existing technology (such as the telephone) or privately owned, non-broadcast electronic media (such as the videodisc or video cassette). A number of commentators urge increased utilization of such alternatives, especially where it can be seen that there are difficulties associated with reliance on print media. (See, for example, Wagner, 1980). Derraton (1973) has argued that distance educators ought to vary the media which they use if for no other reason than it provides variety for students and will prevent them from growing bored, thus stimulating them to keep working. Even so, there appears to be a cautious reaction to the adoption of new communications technology in education (See Brice, 1983).

NZTCI planners would probably agree with McDonald and Livingstone's assessment of the increasing role of communications technologies in distance education; that computers, word processors, videotext systems and satellite communication will play an increasing role in the future. (NZTCI, 1985). This is not to say that a revolution in teaching technologies is in the offing. New techniques are likely to be introduced very gradually and the NZTCI's heavy dependence upon print is likely to continue in the foreseeable future. It remains to be seen whether there will be any attempts to emulate the recently announced (July 1986) British scheme to create an "Open College of the Air", utilizing radio and television to increase educational and training opportunities for young Britons. This new structure will concentrate on vocational training and is not intended to provide direct competition to the Open University.

III. Drop Out

Dropping out, or departure from a school or course without official recognition of completion, has been identified as a problem in many countries around the world. Wilkinson (1982) conducted a study among 1,579 autumn 1981 enrollees of Cowplain FE Centre in Hampshire, England and reported that one hundred and seventeen students (7.4%) of the total original enrolment were absent from the final three sessions of the term; ten percent of these were from vocational courses. Roberts and Webb (1980) examined enrollments and dropouts in 395 classes at Huddersfield Polytechnic (England) at four centres over two years and found that 15.5 percent left a course three weeks or more before the end of the period for which they had paid. The dropout rate is 20 percent in the US New England system (Holmberg, 1981) and in Australia among external students (Sheath, 1972). Glynn and Jones (1967) studied approximately 500 adult education students and found that 26 percent dropped out. Cope and Hannah (1975) presented data for US colleges and universities which suggest that 30 to 40 percent of entering freshmen during the 1960's never graduated, a figure which they say had been "surprisingly consistent" since the 1930's. They noted that fewer than half of the entering freshmen during the 1960's graduated on schedule.

A "horrendous" non-completion rate of over 50 percent has been observed in systems where the institution permits students to work at their own pace without absolute deadlines, even when encouragement is given in an attempt to motivate students to make progress (Daniel and Marquis, 1979). MacLennan (1948) said that three-year adult education evening classes in vocational programmes in Great Britain had lost one-third of their enrollees by the end of the first year and two-thirds by the end of the second year. Boyce (1958) reported that General Certificate of Education level courses in Great Britain had a dropout rate of from 30 to 80 percent (with more than half at 50 percent or above). Feasley's (1982) figures for distance education run up to a 75 percent drop out.

Berka (1972) reported on an innovative correspondence education programme in Algeria aimed at newly literate and semi-literate workers in industrial organizations and in an agricultural community. Recognizing the slow turnaround time it takes to respond to a student's assignment and lack of face-to-face communication between tutor and student, may be a factor in drop out in developing countries, the programme taught arithmetic and literacy by correcting assignments on site where the student worked, usually permitting feedback on the same day on which the assignment was turned in. Even under these favourable conditions, the dropout rate was 38 percent.

While the foregoing is no doubt a limited sampling of known drop out statistics in countries outside New Zealand, the literature indicates that there is validity to criticism of distance learning as not being cost effective due to "massive drop out of students" (Neil 1981, p. 40; Holmberg 1977, p. 29). Is New Zealand any different?

McVeagh (1976) reported that one in three part-time adult students taking New Zealand's Correspondence School courses dropped out. Two types of individuals contributed to the dropout rate: the "non-starters" (those who indicated an intention to begin studies but did not follow through), who constituted 19 percent of the student population; the "later casualties", (those who began their studies but failed to complete their course of study) who accounted for 14 percent of the student population. McVeagh felt that the 33 percent dropout rate was no higher than for equivalent evening classes (with face-to-face contact between teacher and student). James et al., (1979) concluded that the dropout rate in New Zealand distance education was no worse than that for the vast majority of the correspondence agencies throughout the world, or for face-to-face education. Nevertheless, much of the existing literature suggests that distance education students are more likely to drop out than are classroom students (Feasley 1982). In New Zealand, there is support for this case.

Horton (1976) reported that 16 percent of participants in 20 university extension courses at the University of Waikato in Term II (winter) 1975 dropped out; there were no differences in the dropout rate between courses. Panckhurst, Panckhurst and Wagner (1986) found that correspondence students had the highest dropout rate from technician engineering courses in New Zealand (29%), followed by 24 percent for part-time day students, 20 percent for part-time evening students, 16 percent for full-time students, 7 percent for part-time day and evening students, and 3 percent for block/sandwich course students. Boshier (1969) reported that the dropout rate from Wellington University Extension courses in 1967 was 30 to 40 percent, a similar rate to those of Wellington High School Evening Institute and Wellington WEA classes.

What are the causes of dropping out? Tremaine and Cavanagh's (1979) investigation of Massey University extramural students who reduced their study commitments during the academic year revealed that the major factor in such withdrawal was "a lack of time to complete the assignments to meet the deadline" (42%). Other factors were age (younger students), and marital status (single students), "fate" (or the unpredictable nature of life) and a return to formal studies (seemingly more significant for provisionally-admitted students). McLellan (1980) in a study of the reasons for withdrawal amongst teachers doing correspondence studies, reported that the most frequent reasons given for withdrawal were "initial work load" (33%), closely followed by "personal reasons" (28%).

A basic way of categorizing dropout reasons was advanced by Wilkinson (1982), who classified the open-ended responses of 68 adult dropouts as either "personal reasons" or "service failings". Seventy-five percent of the reasons were classified as outside of the control of the Centre (such as health problems), while the balance were attributable to the Centre (such as indifferent teaching). Taking this classification system a stage further it is possible to take the known reasons for drop out and group them in more detail under four general categories: demographic, social interaction, interpersonal or psychological, and institutional. Only the last category is internal to the educational system. However, all four categories interact and should not be thought of as mutually exclusive (See Bligh, 1977; Sattar, 1984).

1. *Demographic Causes*

The demographic predictors of drop out have been quite well studied. One of the most common of these is gender. Tinto (1975), reviewing over 10 US studies of drop out in higher education, reported that males were less likely to drop out than females. However, among those dropping out, females were more likely to be voluntary dropouts. Tinto speculated that males may have perceived their educational attainments as more directly relevant to their occupations and careers, and thus as more of an economic necessity than did females. Cope and Hannah (1975) felt that reasons for drop out were gender-related: that women dropped out for external and nonacademic reasons (e.g., marriage), while men did so for internal and academic reasons (e.g., lack of motivation, dissatisfaction, little interest in studies, low grades). They believed that women who persisted in their studies were guided by intellectual, aesthetic and social orientations. Men who persisted, on the other hand, were thought to feel personally adequate and competent. They were not searching for their own identity. By contrast, Cope and Hannah felt that women who persisted in their studies were searching for personal identity. Whether these explanations would be valid in the US today is uncertain, given the increased emphasis since 1975 on education of women and their occupational attainment.

Watson (1974-5) reviewed data on 19,763 secondary school dropouts in the Province of Ontario in Canada during 1974-5. Males were more likely than females to drop out (58.1% compared to 41.9%) in an educational system which contained 51.8 percent males overall. Rosier (1978) studied a panel of 2,394 persisters and 1,207 dropouts in two waves, during the years 1970 and 1972, in a geographically diverse sample of Australian secondary school students. He reported that males were more likely to persist than were females. However, Poole (1978), examining more recent case study records of Australian school systems found no sex differences in dropout behaviour at any age level. No sex differences were found between persisters and dropouts in a British adult education centre (Underwood, 1974) or in New Zealand adult university extension courses (Boshier, 1969; Horton, 1976).

Generally, the independent contribution of age appears not to have been well studied, particularly in adult tertiary education. Knox (1979) observed a slight decline in successful participation in educative activities with age. Underwood (1974) found that British students aged 45-59 were more prone to drop out than younger students. Horton (1976), however, found no age differences between dropouts and persisters in New Zealand adult university extension courses.

Ethnicity origin also has been shown to be related to drop out rates. However, in a developed country (Australia), Poole (1978) found that students with different ethnic roots had higher educational aspirations and tended to stay in school longer, but this varied by ethnic group. Knight (1977) found that drop out among Melbourne secondary school females in the early to mid-1970's was greater when the father (and presumably, the family) had been in the country for shorter periods of time. Poole (1978) found that Australian Aborigines had markedly lower participation levels in formal education. The effects of race on drop out, particularly among races with minority status, appears to have been virtually ignored, perhaps because race has been masked due to its strong correlation with a variable which appears to have had more theoretical interest to researchers, that of socio-economic status (SES).

SES has been examined widely as a possible predictor of drop out, with remarkably consistent results. SES is a multi-dimensional concept, which includes income, occupational status and educational level, all of which are positively intercorrelated. Family income, educational levels and occupational status are unified around the concept of social class (Cope and Hannah, 1975). O'Shea and Corregan (1979) suggested that class is a fundamental barrier for many potential students. They argued that adult education was primarily "middle class" in perspective and thus kept itself separate from the "working class" through physical and cultural distance. On rare occasions when working class people attempted to "better" themselves and to escape from intolerable working situations by enrolling in adult education, they experienced intense distress: "For the students in our study, the heroic proportions of their individual motivation overcame some of the cultural differences and most of them completed their courses. However, education was experienced in political terms leaving them with severed relationships, disrupted families, politically ambivalent and in some cases, antagonistic toward our institutions" (pp. 234-235). The ironic thing was that this study was based on a two-year informal advanced education project for male industrial workers in Great Britain clubs and pubs — a setting which should have reduced at least the situational barriers to adult education for the working class.

Tinto (1975) examined university students in the US, while Knight (1977), Rosier (1978) and Poole (1978) studied secondary school students in Australia. All found strong relationships between SES and drop out, with lower SES students being much more likely to leave school (See also Bligh, 1977). Garrison (1985) reported on a study conducted in Canada among 89 adult learners who were studying 10th grade English and math courses. They were participating in a high school completion programme on a full-time basis during fall, 1982. Garrison found that students who had experienced more socioeconomic changes as measured by the Social Readjustment Rating Scale (SRRS) (Holmes and Rahe, 1967) were more likely to drop out. Poole (1978) found that the SES variable remained a strong predictor after controlling for sex. However, Boshier (1969) found no difference in SES between New Zealand adult university extension student persisters and dropouts.

Knight (1977) measured SES indirectly, but found that over a third of the female students interviewed (35.6%) cited "parents couldn't afford" as a reason for leaving school. Fathers of those who stayed in school had more job stability. Cope and Hannah (1975) and Tinto (1975) found that as the affluence of US students' families increased, dropout rate decreased. Boshier (1969) found that 1968 levels of television ownership, an indirect measure of affluence, was not related to drop out or persistence in adult university extension courses. Watson (1974-75) found that the lower the family's income among Ontario secondary students, the greater the dropout rate. Father's occupation did not appear to be related to school leaving. Father's education was not found to be a factor in Watson's sample, but education was a factor in other studies. Cope and Hannah (1975) and Tinto (1975) found in the US that as parents' education increased, students' dropout rate decreased. Rosier (1978) studying early school leavers in Australia found that the level of literacy in the home was related to dropping out; the higher the literacy, the lower the dropout rate.

Examination of the effect of these variables on individuals shows similar relationships with dropout rate. Knight, for example, found that school leavers who were born overseas and who had fewer years of secondary schooling in their country of birth were more prone to drop out. Underwood found that students in Birmingham and England who had completed their secondary education after age 15 or older were more likely to persist in adult education than those who had left before age 15. Knox (1979) found a positive relationship between an adult's level of education and successful participation in education. In New Zealand, Boshier (1969) found that adults in university extension courses were less likely to drop out if they had a university education. However, Horton (1976) did not find a relationship between education and drop out in the follow-up study.

Tinto (1975) stressed the importance of pre-college education in his model which predicted drop out. He believed that time since last formal education had an effect, as did previous grades, class rank, and high school performance. The higher the grades, class rank and performance, the less was the probability of drop out. Generally it appears the greater the number of years of schooling, the lower the dropout rate.

Tinto also believed that the amount of time spent in an occupation relevant to a certificate or diploma area of study was related to the dropout rate; presumably, the more relevant experience, the lower the dropout rate. Underwood (1974) reported that generally there was no differentiation by day-time occupation between British dropouts and persisters. Boshier (1969) reported a similar finding for New Zealand adults. Panckhurst, Panckhurst and Wagner (1986), however, found that drop out from technician engineering courses was more likely if the student was employed in the public sector (40%) than the private sector (34%). Fewer dropouts had local government jobs (13%) or were full-time students (12%). Wilkinson's (1982) data suggested that British adults who changed jobs were more likely to drop out than those who said their reason to withdraw was due to pressures within their existing job. Panckhurst, Panckhurst and Wagner (1986) also found job changes to be a factor in drop out.

Boshier (1969) drew subjects from 24-session New Zealand University Extension classes where greatest drop out traditionally had taken place. Two hundred and fifty-two subjects were drawn from four class categories in 1968 and (22.62%) were found to be dropouts. The latter were contacted by mail and asked to write "a few paragraphs on why you dropped out". One variable which differentiated persisters from dropouts was marital status. Dropouts were more likely to be divorced or separated from their spouses (7% compared to 2.6% for persisters). Dropouts also were more likely to be single (59.7% compared to 45.8% for persisters). Persisters were more likely to be married (51.6% compared to 33.3% for dropouts). Persisters also tended to have been married longer than dropouts.

Horton (1976) mailed a course evaluation to all persons in University of Waikato (New Zealand) Term II courses who had attended either of the first two sessions of a course in winter, 1975. These twenty courses were of ten weeks duration. Horton received 411 responses (a 76% return rate). He found that marital status differentiated between persisters and dropouts only at the .10 significance level. Separated and divorced students had a "far greater likelihood of dropping out" (p. 61). Over 14 percent (14.3%) of the dropouts were divorced or separated, compared to 6.2 percent of the persisters. Nearly two thirds of the dropouts were married (64.3%) compared to 70.9 percent of the persisters. There was not much difference between the two groups in single marital status (21.4% of dropouts and 22.9% of persisters). Even among the divorced and separated students, however, most finished their courses (73%). Eighty-seven percent each of the married and single students finished their courses.

However, in Great Britain, Underwood (1974) found no marital differences between persisters and dropouts, based on an examination of 1,324 students enrolled in 55 courses at an adult educational centre offering non-vocational work. Panckhurst, Panckhurst and Wagner (1986) found that some New Zealand students enrolled in technician engineering courses dropped out because they got married. Cope and Hannah (1975) reported that women were more likely than men to suggest that marriage was a reason for their dropping out of American colleges and universities. Boshier (1969) found that the number of children did not differentiate New Zealand University Extension Course dropouts from persisters.

Location of residence also has been found to correlate to the dropout rate. Findings consistently have found urban, metropolitan areas to have higher retention rates, while rural, non-metropolitan areas have higher dropout rates (Tinto, 1975). This holds for both non-government (Rosier, 1978) and government secondary schools (Poole, 1978) in Australia. In situations where distance education is not possible or when the student is not enrolled in distance education, rural residence may create travel difficulties (e.g., expense, distance, time and means) which ultimately leads to drop out. Rural and small town students find adjustment to university life in urban areas very difficult and this may be a factor in drop out (Bligh, 1977; Cope and Hannah, 1975). The greater the distance between home and college (excluding distance education students), the greater the dropout or withdrawal rate. Students with an off-campus residence are more likely to drop out than students who live on-campus (Cope and Hannah, 1975). In New Zealand, Panckhurst, Panckhurst, and Wagner (1986) found no association between geographical location and drop out in technician engineering courses.

In general, few multivariate studies have been conducted which examine the contribution of demographic, as compared to other types of variable, to explain variance in drop out or persistence. Anderson and Darkenwald (1979) have conducted such a study and concluded that demographic variables account for only a small percentage of the variance in American adult education.

2. *Social Interaction Causes*

Boshier (1969) and Robinson (1974) explored the relationships between self concept, social relationships and persistence in adult education. Other studies, at the secondary school level (Garrison, 1985; Bligh, 1977) reinforce the importance of self image and social factors with others — siblings, parents, employers, friends and peers, and so on — on persistence and drop out.

In US higher education, Tinto (1975) argued that "insufficient interactions with others in the college" may be a leading cause of drop out (p. 92). Cope and Hannah (1975) wrote that students who did not like the social environment of their college or university were more prone to drop out. Among dropouts, women were more likely than men to be introverted and socially isolated. On the other hand, Cope and Hannah also found that extensive peer social interactions could be associated with higher drop out among US higher education students. Tinto (1975) suggests that excessive social interaction could result in poor academic performance, low grades and drop out. In New Zealand, Horton (1976) in his study of 56 adult university extension dropouts, found that only 5 percent said that "other students hampered progress". This suggests that for adult students who are integrated into community and family social groups already, the immediate peer group in the educational setting is less important.

Indeed, Garrison (1985) argued that adult basic education students were far more concerned with academic than with social integration, in contrast to many younger university students. "Social integration within the school setting is not likely to significantly reduce dropout for those adult learners with families and concomitant responsibilities. It is the impact and required integration of school into the total social milieu of the adult learner that will ultimately determine persistence or dropout." (p. 27).

Still, the frequency and quality of social interactions for those students who meet in educational settings where they come into contact with peers cannot be dismissed. Underwood (1974) surveyed 1,324 adult students in Great Britain and found that 41 percent of the persisters felt their fellow students were friendly compared to only 14 percent of the dropouts. However, the interpretation of these findings is complicated by the fact that persisters were more likely to say they enrolled for social reasons, such as peer friendships. Cope and Hannah (1975) suggest that for college students, incongruence between an individual and her/his social group(s) results in higher dropout rates. Tinto (1975) also noted that social factors external to the college or university (e.g. extensive work relationships and commitments) also might affect academic performance.

In New Zealand, Anderson (1980) noted that distance education students face problems due to the social relationships which are outside the influence of the distance education system itself. These include pressures of family responsibilities, interruptions in studies by family and friends, limited opportunities to discuss their studies with others, and so on. Twenty-five percent of the reasons given for dropping out by New Zealand university extension students involved "family commitments" (Horton, 1976). More than 20 percent of the reasons given by Boshier's (1969) New Zealand adult university extension students for dropping out were attributable to "family commitments". Brice (1983) discussed ways in which New Zealand distance educators attempt to deal with social relationship problems and feelings of isolation experienced by distance education students. These will be addressed later as part of the "institutional" causes of drop out. Brice notes, however, that student motivation derives in large part from contacts with persons elsewhere and from the stimulation of some adult, such as father, mother, spouse, or relative.

Many potential students feel they cannot start their studies at all, because their social interactions with others at home or at the place of work are such that they cannot find time away from their responsibilities to contemplate educational studies which take them out of the home. Such barriers as lack of child care and inadequate transportation are often cited as deterrents to further education. Cross (1978) estimated that from 20 to 50 percent of non-students cited job or home responsibilities as preventing them from beginning their studies. Distance education would seem a viable alternative for these persons.

Knox (1979) believed that life change events, such as the birth of a child, marriage, or retirement, had profound unsettling consequences on the individual's readiness to learn. Social relationships change as a result of major life change events and the quality of social exchanges can affect studies. Knox, noted that encouragement by friends, acquaintances and organizational co-sponsors could have positive effects on a person's decision to take up studies, but negative or "estranged" social relationships could influence students to give up their studies (See also Bligh, 1977).

Within the family, parents appear to exert a much greater effect than siblings (Rosier, 1978). As well, when comparing the influences of family and school "parents continue to be the most critical reference group of leavers making educational and vocational decisions" (Poole, 1978; Rosier, 1948). Tinto (1975) found that drop out decreased as the students' parents showed greater interest in, and higher expectations of, their childrens' education. Such parents were more likely to offer advice and to give praise. Knight (1977), studying factors affecting school leaving among secondary school girls in Melbourne, Australia, found that 13.2 percent of the dropouts said that the fact that their parents had counselled "no more education" was either a "fairly" or "very" important reason for their leaving school early. Ten percent said their parents had indicated that they did not have enough ability to keep studying and that this was either "fairly" or "very" important for them in making their school leaving decision.

The indirect role model provided by the parents' own behaviour also may play a part. Watson indicated that nearly two-thirds of the dropouts' fathers and mothers had left school before completing the equivalent of grade 12. Craft (1974) in a study conducted in Dublin, Ireland, matched 118 school leavers and their families, with a control group of school persisters and their families. He found that fathers were generally more future-orientated and activistic than mothers, but when mothers were active and future-orientated, the children — especially daughters — showed persistence. And where both parents were actively forward looking a child was more likely to stay on.

Peers appear to play a less important role in the school drop out decisions for primary and secondary school students than among university-level students. Knight (1977) noted that Australian secondary school girl dropouts tended to perceive themselves as less academically able when compared to their primary and secondary classmates. This influence of teachers, parents and peers is indirect and may be attributable more to observation than to interaction. Social isolation has been cited as a cause of drop out in post-secondary education (Bligh 1977). However, Rosier (1978) found that 16-year-old Australian dropouts were more likely to have extensive social activities than those who persisted in school. Among adults, Knox (1979) argued that encouragement by friends and acquaintances to take up studies would lead to enrollment decisions. Presumably, discouragement by the same peers might have influence on decisions to drop studies. Tinto (1975) observed that US university students were more likely to drop out as their social interaction with peers increased in such organized activities as fraternity or sorority membership, or sports participation.

Sports and recreational commitments have been cited as a cause of drop out from New Zealand Certificate in Engineering courses (Panckhurst, Panckhurst and Wagner, 1986). Twenty-two percent of English adult students said they dropped out because their course was interfering with their social life (Underwood, 1974). For organized social and sports/recreational activities, drop out may be due in part to difficulties in scheduling and time budgeting between school work and social interests (Bligh, 1977; Rogers, 1977).

We discovered little research on work-related reasons for drop out. In New Zealand, a quarter of adult university extension dropouts said they had dropped out in part because they were "too busy at work" (Horton, 1976). A majority of Australian girls who dropped out of Melbourne secondary schools cited "to earn my own money" as their first and second most common reasons (60.7% "fairly" or "very" important). Canadian secondary school dropouts gave "took a job" and "needed money" as major reasons for leaving school (Watson, 1974-4). Stoessiger (1980) noted in his study of school leavers in rural areas of Western Australia, Queensland and Tasmania that "pro work" reasons for leaving school were ahead of the "leave school" reasons, which in turn were ahead of all other categories studied. Thus, work with its related social relationships and interactions, does provide a powerful source of competition to academic studies for some students in advanced secondary schools.

We have already mentioned that adults' work experiences can exert positive or negative influences on their decisions to take up advanced studies or to quit their studies. Levinson et al., (1978) have pointed out the centrality of work: " ... A man's work is the primary base for his life in society. Through it he is 'plugged into' an occupational structure and a cultural class and social matrix. Work is also of great psychological importance; it is a vehicle for the fulfillment or negation of central aspects of the self." (p. 9).

3. *Psychological/Intrapersonal Causes*

Poole (1978), reviewing Rosier's (1978) results, noted that intrapersonal factors may be more important predictors of school leaving than family social relationships factors or school environment structural factors. Intrapersonal factors are those which are unique to the individual. In the section which follows, these factors have been grouped under an appropriate psychological concept: abilities, motivation, behaviour, judgement, personality characteristics, or perception.

Only passing reference appears to have been made in the academic literature to the learner's abilities as a possible factor in drop out. Garrison (1985) attempted to predict drop out in adult basic education in Canada and found that dropouts had lower scholastic ability scores. Cope and Hannah (1975) noted that the greatest proportion of withdrawals from US colleges and universities were among the academically less talented, those with less intellectual development, and those with low aptitude scores on academic readiness tests. In fact, high school grades or class rank were the best predictors of the drop out and persistence. Many investigators have assumed that grades and rank reflect ability, although this is a debatable assumption.

Tinto pointed out that past measures of learning performance, (grades), were associated with drop out, the higher the previous grades, the lower the drop out rate. (For a somewhat contradictory finding, see Panckhurst, Panckhurst and Wagner, 1986). Anderson (1980) appeared to have learned abilities in mind when she said that extramural students have a "capacity for organization rarely found in younger school-leaver internal students" (pp. 10-11).

Student motivation would seem to be an important factor in the student's decision whether or not to continue her or his schooling. Good (1973) defined motivation as "the process of arousing, sustaining, and regulating activity" (p. 375). Page and Thomas (1977) noted that the behaviour which results has physiological or social needs as its origin and that motives are impulses or drives which arouse and sustain goal directed activities. These motives may be conscious or unconscious, intrinsic or extrinsic.

Horton (1976) found that 11 percent of New Zealand university extension dropouts said they had "lost interest" in a course before dropping it. Similarly, Panckhurst, Panckhurst and Wagner (1986) found that some New Zealand dropouts from technical engineering courses cited motivation reasons such as "loss of interest" as a reason for dropping out. Bligh (1977) noted that "difficulty in settling down to work" and "poor study concentration" were major causes of drop out. He also said that the social organization of distance education courses "repeatedly" has been found to be a major determinant of motivation (p. 253). Anderson (1980), using her personal experience as a distance education student and teacher, believed that adult tertiary students had "outstanding" motivation and were "well-disposed towards their work, keen to succeed ..." (pp. 10-11). Poole (1978) pointed out that "academic achievement motivation" was an important variable in a student's decision whether or not to leave Australian secondary school. Generally, as motivation decreases, drop out increases (Cope and Hannah, 1975).

Garrison (1985) noted that an important motivational concern for adult learners was that they perceive the curriculum to be relevant to their goals. Garrison cited Anderson and Darkenwald (1979) as having found that terminal values are very important in academic persistence: "... (they found that the) most powerful predictor of persistence in adult education is satisfaction with the learning activity in terms of its 'helpfulness' in meeting one's objectives." (p. 27). However, Garrison discovered that Canadian dropouts generally thought that their courses were more relevant and seemed clearer about their goals than did persisters. Through multivariate analysis, Garrison eventually explained this anomaly as follows: "... students with lower scholastic ability, lower self-confidence, and greater socioeconomic change may set unrealistic expectations of the program resulting in an incongruence leading to drop out." (p. 36).

Other aspects of behaviour have been shown to influence drop out. For example, Knight (1977) mentioned that school leavers are less peer conformist than school stayers. Boshier (1969) found that New Zealanders who previously had dropped out were more prone to drop out another time (which he referred to as a "general personality pattern"). Successful previous participation in adult education, on the other hand, was predictive of successful participation among the adult group studies (with only 13.7% dropping out, compared to 68.4% of first-time participants).

McVeagh (1976) observed that "some adult students are inclined to over-commit themselves or to be over-optimistic as to their potential or the time they have available to study" (pp. 85-6). Cope and Hannah (1975) cited instances of students dropping out because they had made a poor choice of college or university in the first place. In both cases, student judgement was in question.

The values which students hold appear to influence decisions to do with persisting or dropping out. Sociologically, a value can be defined as: "... an abstract, generalized principle of behaviour to which the members of a group feel a strong, emotionally toned positive commitment and which provides a standard for judging specific acts and goals." (Theodorson and Theodorson, 1969, p. 455). From a more psychological standpoint, values link the individual with his or her social environment and can be defined as "beliefs about what is desirable or undesirable" (Page and Thomas, 1977, p. 357).

Tinto (1975) gave great theoretical importance to values, based on his review of more than 100 US studies of student drop out from higher education. Tinto said that drop out may be due in part to: "... insufficient congruency with the prevailing value patterns of the college collectivity ..."(p 92)..."an individual's education goal commitment ... helps him into the college setting — orientations that are important predictors of the manner in which individuals interact in the college environment ... one would anticipate goal commitment to be directly related to persistence in college" (p 93). Tinto also believed that individuals have "institutional commitments": that is, commitment to one educational institution over another as more likely to meet personal needs. He considered that an individual's desire to complete a course, and her or his commitment to the institution, would influence a decision to persist or drop out from college. It follows that if educational plans and expectations mesh with job and career plans and expectations, the greater will be the student's persistence in her or his studies. Further, the greater the student's expectations of future occupational status, the less likely he or she will be to drop out. Rosier (1978) determined that 16-year-old Australians were more likely to still be in school if, at age 14, they had expressed a commitment to present and future education.

Cope and Hannah (1975), stated unequivocally that "personal commitment to either an academic or occupational goal is the single most important determinant of persistence in college" (p. 19; also see Hillery, 1978). Thus, consummatory values may be more important in explaining the drop out phenomenon than instrumental values. Interestingly, Schedvin (1985) found that prior goal commitment could be a cause of drop out in situations where the student was not studying in the field of first choice and when an opportunity became available to enter the preferred field. Among Schedvin's Melbourne first year dropouts, this reason accounted for approximately one-fourth of the voluntary discontinuations. Cope and Hannah (1975) also cited the students' desire to reconsider personal goals and contents as a cause of drop out. They also pointed out that some students drop out because they feel they are fulfilling less than their degree expectations.

Poole (1978) noted that high educational aspirations and expectations and high job aspirations were positively associated with Australian adolescents' decisions to remain in school (see also Knight, 1977). However, students who dropped out tended to criticize schools as not catering to their needs or being irrelevant to their job plans. Unlike Cope and Hannah (1975), and Panckhurst, Panckhurst and Wagner (1986), Bligh (1977) said that doubt about vocational choice was a cause of drop out. Schedvin (1977) found that half of the Australian drop out students she studied had enrolled in health science vocational courses as a means of "reality-testing a career" and dropped out when they discovered that they were not well-suited.

The way the student perceives and interprets experience is an important determinant of behaviour. Expectations of the present and future tend to vary from person to person. According to the way in which "the individual organizes and makes sense of his/her sensory experience" (Page and Thomas, 1977, p. 261) the individual reacts in a particular situation in the light of previous learning, activities, interests and experiences. Thus, the concept of selective perception is crucial to an understanding of differences between individuals.

Knight (1977) found that Australian girls who left secondary school were more likely to see school as dull and boring and school discipline as harsh or easy, but unfair. They also perceived themselves to be of below average academic ability. Leavers had less sense of positive participation in school decisions of importance and were less likely to perceive that they were treated as individuals while in school. Over a fifth of the leavers stated that a major reason for their leaving school early was that they didn't have enough ability to continue their studies (26.6%) or that the results of their schooling were not good enough (23.3%); both conclusions were based on perceptions of themselves and their educational performance. Poole (1978) said Australian adolescent school leavers tended to perceive school as regimented, teachers authoritarian, school rules as restrictive, school relationships as impersonal, and the environment as pressure-laden. Student perceptions, in this example, were associated with strong emotions.

In US higher education Tinto (1975) found that males more than females perceived educational attainment as directly relevant to their future careers and to economic necessity. Cope and Hannah (1975), also writing of US college and university students, found drop out to be greater if studies were perceived as boring, or if the student was dissatisfied or generally disillusioned. Dropouts often had a perception that they were wasting time or they saw themselves as getting caught up in a meaningless rat race. Rosier (1978) noted that self-esteem and drop out rates were positively related.

Canadian secondary school dropouts often "hated" school and/or expressed dissatisfaction with teachers, courses and programmes (Watson, 1974-75). Tinto (1975) noted that anxiety was associated with dropping out (See also Bligh, 1977; Rogers, 1977). Rogers (1977) noted that older students, who often haven't been in a formal learning situation for a long time, become anxious about their perceived inability to learn. This can be exacerbated if they perceive other students to understand the subject matter when they personally have had little initial success. Butler (1980) explained her insecurity in this respect, and felt institutional unwillingness to address this emotion was a major cause of her dropping out of a ceramics course.

Panckhurst, Panckhurst and Wagner (1986) examined New Zealand adults in technician engineering courses. In most cases, these students were employed in a related job while studying for a certificate. They found two-thirds to be "reasonably happy" in their employment while studying, while one-fifth were not happy. Some 12 percent said unhappiness at work affected their study.

Cope and Hannah (1975) suggested that drop out increases with increases in emotional and psychiatric problems (also see Tinto, 1975). They pointed out, further, that emotional distress was more often associated with social relationships, particularly hetero-sexual, than with academic causes. However, fear of failure due to some specific academic difficulty, was judged a cause of dropping out among one-third of Australian health students (Schedvin, 1985). Brice (1983) reported that student accomplishment among tertiary distance education learners in New Zealand stemmed in part from enjoying oneself as a student and from a sense of personal satisfaction as a result of having learned something new.

An individual's characteristic way of behaving — personality — is obviously relevant to the educator. Tinto (1975) wrote that research evidence showed that drop out rates increased with increases in the following: impulsiveness, over-activity, restlessness, over-sensitivity and egotism. Conversely drop out rates decreased with an increase of the following: ability to profit from past experiences, flexibility and stability. Bligh (1977) noted that post-secondary dropouts were less flexible in their patterns of study. Generally, Tinto believed that persisters in school were in good mental health. Anderson (1980) noted that adult tertiary students generally are grateful for help and are mature. However, in distance education, they may also feel ignorant and undervalue themselves. Brice (1983) believed that New Zealand distance education adult learners were motivated by a strong sense of competitiveness (i.e., they wanted to do as well as those attending an institution) and were ambitious (i.e., they wanted to gain a qualification and to better themselves). Finally, Brice believed that they were curious and open-minded (i.e., they wished to extend their horizons and abilities).

McVeagh (1976) noted that adults taking correspondence courses in New Zealand were characterized by a high degree of commitment and self-direction, maturity and independence. He stated that they had a clear vision of what they wanted to learn and the willingness to develop their own study approaches despite rather severe strains on the amount of time they were able to devote to their studies. Knight (1977) suggested that school leavers tended to be more alienated from school activities and hence had less identity with, and commitment to, the school.

Cope and Hannah (1975) reported that many studies of personality had been conducted in an attempt to develop a dropout student profile. They reviewed studies which suggested the following dropout personality characteristics: a greater value placed on sense impressions, more imagination and enjoyment of fantasy, more rebelliousness, more aloofness, more self-centredness, more impulsiveness, more assertiveness, more creativeness, more maturity, more sophistication, more critical and independent thinking, and greater intellectual curiosity, less narrow conventionality, greater expression of impulse, and a higher tolerance for ambiguity. However, because many of the studies were flawed in methods, Cope and Hannah judged them to have shed little light, concluding that "there is no dropout personality, only individual personalities interacting with different campus environments at various times in their mutual and changing lives" (p. 102). Knox (1979) suggested that successful participants in education tended to have more instrumental information-seeking behaviors, in terms of print and electronic media use, which in turn is a strong characteristic of those who have achieved higher education levels.

4. *Institutional Causes*

Under this heading, we consider those factors in drop out which appear to be under the direct or indirect control of the educational establishment. For example, New Zealand distance educators have been aware that a lack of communications between tutors and students may lead to drop out. As a result, attempts have been made to improve the frequency and quality of that communication: "...in the past decade or so tapes have become a very important means of personalizing distance education for both school and adult students of the three institutions (Correspondence School, Massey University Centre for Extramural Studies, Technical Correspondence Institute). The portable cassette recorder and radio tape recorder have made it possible for audio exchanges between teachers and students to build up rapport and confidence, and to extend knowledge and experiences.

Teachers use tapes not only for lessons but to 'talk' to their particular students. However, because this electronic media exchange relies upon the mail service there is, inevitably, delay in such conversations and inter-changes. In recent years, more and more, the telephone has been used for personal teacher/student contact, and for telephone tutorials. A trial use of video-tapes by the Technical Correspondence Institute to assist its students (Brice, 1983, p. 65) was discontinued after a period of experimentation.

Wagner's (1981) study of some student dissatisfaction with adult vocational and professional distance learning courses focused on 324 extramural students attending block courses at the Institute. He reported that sex, age, prior educational attainment, and reading comprehension level (as measured by the cloze procedure) were factors in explaining differences in attitude response. He concluded that individual learning styles and cultural differences needed to be taken into account when tutors plan and write extramural courses. Brice wrote of attempts by NZTCI to provide better laboratory and block courses in practical work at locations away from the NZTCI campus for individual needs. These were often taught by the tutors. Further, non-practical block courses and voluntary seminars were held at NZTCI. These activities were responses by the institution to assist students in the hope that learning would be expedited for them and that these extra efforts would prove beneficial in terms of reducing drop out.

Based on detailed questionnaire responses by 97 New Zealand Certificate in Engineering dropouts, Panckhurst, Panckhurst and Wagner (1986) determined that the main reasons for drop out could be classified as course-related (34.5%), job-related (32.2%), commitment/interest (18.9%) and personal (14.4%). They concluded: "The course-related responses suggested that course difficulty was a very important reason for drop out. This reason became especially pertinent when linked with correspondence study" (p. 107).

It appears that concerns for the effects of interpersonal communication, mediated communication and interaction between tutor and student have dominated research on institutional causes or correlates with the drop out phenomenon. Waniewicz (1968) suggests that perceived limitations of the print media, (most commonly used in distance education), may be the stimulus for much of the research on media effects. His criticism was scathing: "Correspondence studies, in which the student is limited, for the most part, to the dry matter provided in the textbook, with only a minimum of illustration, are considerably difficult and uninviting, especially in the exact sciences. Small wonder, then, that many correspondence students give up in their first year of study, and many enthusiasts never actually decide to take a course" (p. 19).

Research into the communication effects of broadcast media, as a factor in drop out, generally have concluded that the addition of television to a course has positive consequences. Lipson (1977) noted "that completion rates of correspondence courses have dramatically improved with the addition of regular television broadcasts" (cited in Feasley, 1982, p. 452). Feasley refers to work by Chamberlin and Icenogle (1975) and by Lipson (1977) to support his contention that a 40 percent improvement in correspondence course retention rates can be achieved through the addition of a television component to a course. Brown (1975) believed such improvements may be due to the "pacing" function of TV, because students reported that they were more likely to pay regular attention to their course materials if they were encouraged to watch a TV programme at a given time on a regular basis. DeGoede and Hoksbergen (1978) demonstrated that a steady rate of progress was essential to a student's completion of the course. However, Knox (1979) contended that adults learn more effectively when they learn at their own pace.

One of the best sources of information about the effects of television has accrued through the experiences of the British Open University. Bates (1983) writes that students who passed exams were more likely to have viewed the television component of their course than those who failed or dropped out. Further, students who received A or B grades were more likely to have viewed TV than students who received C or D grades. Weaker students who watched or listened to broadcasts, however, rated them as more helpful than students who achieved greater success. This was the opposite of the trend for correspondence texts.

The effects of school tutors, administrators and staff on students' decisions to leave or persist in their studies have been extensively studied. Knight (1977), for example, found that school stayers were more stable in their interaction with school staff. Tinto (1975) claims that as interactions with faculty, administration and staff increased, drop out rate decreased. Poole (1978) concluded that early leavers were irked by the impersonality of relationships within the school setting. Knox (1979) noted that for adults, even the initial setting for learning was critical. Participants who immediately felt welcome, who were reassured that they would not fail and who felt group support and sharing in their studies were more likely to persist. Rogers (1977) claimed that if the students did not like the first class and/or first impressions of the teacher, drop out was likely. Underwood (1974) found that persisters in an English non- vocational adult education setting more often felt they had been welcomed by the centre head (41%) than did dropouts (21%). Cope and Hannah (1975) said that US college students who had limited involvement with their instructors were more likely to drop out.

Bligh (1977) echoed these findings, noting that remoteness of teaching staff was a contributor to drop out. Dropouts were less likely to seek academic help from their tutors or teaching staff. Wilkinson (1982) mentioned dissatisfaction with tutor and "social factors" as leading to drop out. Butler (1980) castigated her adult education teacher for being insensitive, unfriendly, impersonal, not available to give help, unenthusiastic, too casual, uncommitted and unwilling to give feedback as reasons why she dropped a ceramics class. It was clear she wanted a level of individual attention which the teacher was unable or unwilling to give.

Boshier (1969), in his New Zealand study of adult university extension classes, concluded that relationship stresses and discrepancies between student and lecturer expectations, as well as student perceptions of themselves in relation to elements in the adult education environment, deserved additional research study. Rogers (1977) noted that adult students were sometimes shy initially when attending classes and gave an example of one student who dropped out when the teacher "volunteered" him for an oral class presentation. Cope and Hannah (1975) noted that college administrators who demonstrated little apparent concern about the individual student's progress or conduct, contributed to higher drop out rates.

On a more formal level of teacher-student communication, lectures above the heads of students in face-to-face classroom settings, were singled out as a contributor to drop out (Rogers 1977). Boshier (1969) also reported that dropouts complained of negligent lecturers, and poorly prepared lectures. Horton (1976) pointed out that 14 percent of New Zealand adult university extension course dropouts blamed poorly prepared lectures or inadequate lecturers as a major reason for their leaving.

In distance education, most interpersonal communication is by post and falls on the tutor. James et al., (1979) argued that drop out in distance education would be reduced if tutor/student interpersonal contact was increased and the quality of support improved. They suggested that self-paced learning, regular feedback from tutor to student and good rapport between tutor and student were important. Holmberg (1981) said that distance education students wanted feedback within seven to ten days of the completion of their assignments. Panckhurst, Panckhurst and Wagner (1986) studied NZCE technician course dropouts and found that the time required to receive feedback on mathematics assignments was a critical factor for any dropouts, given that about ten assignments had to be completed in approximately 38 weeks and that the typical turnaround time was four weeks (Panckhurst, Panckhurst and Livingstone, 1986).

As in all teaching, the quality of the tutoring is important. This implies that tutors should not only be knowledgeable in subject matter, and able to communicate the subject, but they should have positive attitudes towards students, and the flexibility to deal with a wide range of student abilities (Underwood, 1974). Dropouts were more likely than persisters to perceive deficiencies in teacher preparation of subject matter, perceive more negative teacher attitudes toward students, and object to the manner in which the subject was presented. Panckhurst, Panckhurst and Wagner (1986) were told regularly by New Zealand distance education dropouts that their reasons for leaving had to do with not "getting on" with tutors. As a result, they recommended that higher levels of personal help be given to students. Callaghan (1981) argued that distance education tutors had to be sympathetic. However, it could not be assumed that tutors would necessarily have the qualities needed for effective teaching at a distance, or develop them on the job. On-going staff development and training was therefore considered advisable (James et al., 1979).

There is evidence that certain subject areas are more prone to drop out than others. In the United States, Cope and Hannah (1975) reported that business studies are more susceptible to student drop out than the natural sciences. There also was some inconclusive evidence that liberal arts subjects were more likely than professional ones to have student leavers. In England, Roberts and Webb (1980) reported that the mean drop out rate for academic classes was 33.2 percent; for language, arts, and practical classes the drop out rate was approximately 16 percent; and domestic, physical recreation, and special classes had the lowest drop out rates of approximately 9 percent.

Whatever the subject matter, drop out rates can be reduced by giving care to specification of important and relevant educational objectives (Knox, 1979), by making sure that goals are clarified

(Garrison, 1985), and by doing everything possible to ensure that the course will be relevant to the particular type of student learner (Garrison, 1985; Knox, 1979). When the course is vocationally-orientated, care should be taken to demonstrate its job relevance to the student (Panckhurst, Panckhurst and Wagner, 1986). Twenty-eight percent of Underwood's (1974) adult dropouts objected to the content of their courses.

James et al., (1979) argued that existing courses should be periodically evaluated and content and presentation possibly redesigned. Lack of subject exemptions for qualified students at the beginning of their studies is a source of dissatisfaction (Panckhurst, Panckhurst, and Wagner, 1986). Other students can be dissuaded from their studies by a perceived lack of electives and restricted subject choices (Poole, 1978). Knox (1979) pointed out that some students quit their studies because information is not accessible to them.

Finally, investigators have found the level of the course must be geared to the abilities and experience of the intended students. Wilkinson (1982) found that the most important reason for student drop out in terms of "service failings" was "course level not as anticipated." Horton (1976) noted that 16 percent of New Zealand adult university extension dropouts reported that the "course failed to meet needs." Occasionally, students in New Zealand have dropped out of courses because the courses were "too technical" (Boshier, 1969; Horton, 1976), or "too difficult" (Horton, 1976; Panckhurst, Panckhurst and Wagner, 1986). Level of difficulty was also a consideration in England, judging by the suggestion that introductory courses should be provided for beginners in various subject matters (Roberts and Webb, 1980). In the US, Tinto (1975) demonstrated that academic-related causes, such as course difficulty, were a major cause of drop out. Boshier (1969) reported that several dropouts from university extension courses had left because their progress had been hampered by different levels of students in their course(s). However, class size may, or may not, be related to drop out rates. Roberts and Webb (1980) found no class size impact, whereas Wilkinson (1982) reported that dropouts complained about classes being too crowded.

Roberts and Webb (1980) studied the gender composition of courses at the Centre for Adult Education at Huddersfield Polytechnic, England. They found that courses with both sexes had a drop out rate of 18.2 percent; those with females only had a drop out rate of 12.6 percent and those with males only had the lowest drop out rate, 9.8 percent. The reasons for segregation by sex were not made clear in their article, but it is suggested that segregation had a positive effect on persistence. Whether there was an interaction with subject matter or type of course cannot be determined.

In planning a curriculum, consideration must be given to the resources needed and their organization. By resources, we mean not only people (teachers, administrators, staff), but also finances, facilities, materials, equipment and so on (Sattar, 1974). Not much had been written on the possible effects on drop out of these curricular considerations. However, Tinto (1975) noted that as resources were increased, drop out rates decreased; similarly, as US facilities were improved, drop out rates decreased. Wilkinson (1982), however, reported that in England dropouts at an Adult Education Centre were not significantly different from persisters in the use of the Centre's materials and equipment.

Other factors affecting adult drop out include course loads being too heavy (Boshier, 1969), work, study and committee overloads (Panckhurst, Panckhurst and Wagner, 1986), absence from hometown (Horton, 1976), overseas travel (Boshier, 1969), sickness (Boshier, 1969; Horton, 1976; Wilkinson, 1982), bad weather (Horton, 1976), not enough time off from work to study (Panckhurst, Panckhurst and Wagner, 1986) and missing a key examination (Panckhurst, Panckhurst and Wagner, 1986).

Smith (1979) conducted a study of adult dropouts at the East Midlands Centre in England, conservatively estimating that over one-third (35.6%) had dropped out for reasons that could have been personally predicted, such as family, work or competing educational commitments, medical difficulties, travel difficulties and so on. Before their studies began, 70 percent had envisaged no such problems. Nineteen percent had foreseen difficulties but these had not eventuated. Only 11 percent properly anticipated difficulties, suggesting that "many students seemed to be very optimistic of their ability to circumvent these problems" (p. 110). There are several ways by which an educational institution can help students to be more realistic: by offering clear course descriptions (Wilkinson, 1982), or by providing pre-course counselling — not only of content and expectations (Underwood, 1974), but also of time and timing problems (James et al., 1979; Roberts and Webb, 1980).

"How should learning be evaluated?" There is evidence to suggest that evaluation procedures and policies have an impact on drop out. Informing the student about evaluated levels of success or failure is important. If the student repeatedly is told he or she is failing, it may lead to discouragement and disengagement. If the student has the positive reinforcement of success and achievement communicated to her or him, it may increase motivation to continue (Underwood, 1974; Rosier, 1978). Watson (1974-75) reported that as student achievement increased, drop out level decreased. However, she also noted that 39 percent of Canadian secondary school dropouts were meeting satisfactory levels at the time of their drop out (See also Cope and Hannah, 1975). Speaking of overall US institutional standards of academic achievement, Tinto (1975) noted that as those standards became more rigorous, drop out rates declined. Knox (1979) argued that evaluation properly used, could not only assist adult learners, but could be used to strengthen and improve curricular responsiveness.

IV. Summary

The literature review has shown that distance education is widely used as a medium of instruction in New Zealand and yet there are few New Zealand studies of the characteristics of distance learners, given its potential in adult education and especially vocational education. Now that there is growing pressure upon distance education institutions like NZTCI to take on more students, and in the process make changes in the way that it operates and teaches, more empirical research is required to enable senior management at NZTCI to plan suitable courses to meet the needs of most, it not all, of its students in the future.

The use of educational technology is one way a distance education institution might deal with the student numbers and changing needs of the students in the dawning of the information age. Yet the print mode of instruction remains dominant. After reviewing the literature one might ask "Where do students stand on the question of whether or not supplementary channels to the traditional print medium ought to be used in their education?" We found many occasions in our readings where educators had made decisions regarding the selection of media to be used to carry information to students, but almost no situations where student preferences were given weight in media selection choices.

Although many observers feel the future of the new communications technologies in education is bright, factors such as the availability of equipment, the level of willingness to learn from, or teach with new devices, as well as the need to continuously appraise effectiveness, are important considerations. Robinson

(1982), in his historical appraisal of the relationship of broadcasting and adult learning in Britain, comments that "the two main impediments in the use of the new technologies (are) change of habits and cost." Given that New Zealand does not share a similar tradition of a highly developed broadcasting educational partnership, such impediments are likely to be an even greater factor here. This being so we need clear evidence that adult distance education students would appreciate and learn from the costly new educational technologies.

We speculated at the early stages of this study that factors such as the following might account for completion or withdrawal: (1) social characteristics (e.g., gender, job classification), (2) work commitments (e.g., supervisory responsibilities, change of job during the course of studies), (3) personal commitments (e.g., recreational activities), (4) intrapersonal or psychological motivation (e.g., the perceived importance of working toward better career prospects), and (5) institutional characteristics (e.g., adequacy of mail delivery, turnaround time for comments on suitability of print as a medium of learning). In our review of the literature it is suggested that known reasons for drop out may be grouped in more detail under four general categories: demographic, social interaction, interpersonal or psychological, and institutional. Only the last category is internal to the educational system. However, all four categories interact and should not be thought of as mutually exclusive (see Bligh, 1977, Sattar, 1984).

It is clear that while many different factors may influence individual decisions about continuation or withdrawal from distance education studies, a more satisfactory explanation of the phenomenon would take into account the interactions and interrelationships between the factors themselves. While a good deal of research has been conducted concerning dropouts, (i.e., school leavers, and those who withdraw from formal and informal education, either voluntarily or otherwise), we did not find research which shed much light on this phenomenon among adult distance education learners studying at the tertiary level. Thus, an exploratory multivariate analysis is called for (Panckhurst, Panckhurst and Wagner, 1986; Schedvin, 1985; Wilkinson, 1982; Smith, 1979). Such an investigation is contained in this study.

STUDY METHODS

I. The NZIM Course

Approximately one quarter of New Zealand Technical students, including about 20 percent of all apprentices, undertake their studies with NZTCI. The Management Department (one of 14 at NZTCI) is part of a comprehensive technical distance education programme which offers more than 940 subjects in diverse areas ranging from agriculture to avionics and civil engineering to hairdressing; from trade/craft subjects such as golf course green-keeping and coach painting, to professional subjects such as law and accounting.

NZTCI Management subjects are tutored by 19 individuals, some of whom work part-time. Tutors with practical work or trade experience are preferred to those who have academic and theoretical knowledge only. As a result, NZTCI tutors tend to be older than teachers and instructors in comparable educational institutions. Full-time tutors are expected to grade and make comments on 1,200 scripts per year, spending approximately a nominal one hour on each script, and to author new material at the rate of 10 assignments a year. Also, existing modules and course materials are constantly being revised and modified, at an expected rate of 17 per year per full-time tutor. In practice, most tutors do a mixture of tasks including script marking, assignment authoring, and revising existing educational materials. The expected productivity rates are adjusted to match an individual tutor's particular mix of responsibilities.

Tutors who mark scripts are expected to achieve rapport through encouragement to students even when their comments are largely critical. Spot checks are made by administrators and others, who monitor written reactions to student scripts, and careful attention is given to all written assignment materials which leave NZTCI for the student's home or place of work. The goal is readable, simple, clear, accurate and concise assignments. This is done by filtering written communications through a clear chain of readers and editors, such as technical editors, presentation editors, core supervisors, department heads, typists, art editors, proof readers and printers (Jones, 1986).

The subjects at NZTCI have no educational prerequisite and the resulting students are very diverse. Students of the New Zealand Institute of Management (NZIM), who are 30 years or older, have an automatic right to enrol at NZTCI, even if there is a class offered at the local technical institute or within 16 kilometres of their residence. However, as a formality, the local principal must initial the enrolment forms of such students.

In 1982 and 1983 students could study toward a Supervision Certificate by satisfactorily completing, or being exempted from, eight "half" modules, six of which were required : Introduction to Supervision, Staff Development, Labour Relations, General Administration, Elements of Business Law, and Communication. Two modules could be elected from the following: Elementary Economics, Basic Statistics, Introductory Accounting, Business Administration, Industrial Administration, Retail Administration, or Local Authority Administration. A student had to satisfactorily complete all scripts in each module (i.e., 47 in required modules and from 13 to 21 in the elective modules). Gradings were given on scripts with pass gradings 'A', 'B', and 'C', and fail ratings 'D' and 'E'.

Advanced students, mostly individuals who had achieved middle management positions in their vocational careers, could study towards a more difficult Management Diploma, awarded after meeting prerequisites for entry to this course (e.g., a Supervision Certificate) and after successfully sitting an appropriate NZIM examination. The Diploma course consisted of six subjects: Financial Principles and Controls, Marketing, Management Services, Financial Management, General Economics, Organization and Management, with results graded by an external examiner.

Print assignments and textbooks were the learning materials for supervision as well as management modules and subjects. No supplementary educational technologies, such as telephone or audio cassettes were used. Supervision Certificate module assignments averaged 25 pages, while Management Diploma subject assignments averaged 45 pages.

Developments in NZTCI's management modules and subjects are coordinated closely with NZIM. One of the present authors (H. Barrowclough) assisted in designing a new national syllabus which has been introduced since the time of this survey. NZIM reviews the national syllabus every five years and spends about one year in the review and design of alterations stage. Implementation follows the review. The present management course is the result of this process.

The Supervision Certificate changed to the Certificate in Supervision and Basic Management and came into effect in January 1984. (NZIM Students Newsletter dated November 1982). In the opinion of the third author the degree of equivalence between the old and the new Supervision subjects is as follows: "On a degree of difficulty basis the new Labour Relations is more difficult than the old, is more legalistic in content, and probably of equivalent difficulty to the old Elements of Business Law. Basic Economics has a similarity to the new Basic Marketing — both deal with principles and concepts with test paper questions of the essay type. However, it may be true that Basic Economics is a little harder. There is no real equivalent to Basic Statistics but it is probably a little easier than Introductory Accounting. Although the new course is different, both Financial Services courses are equal in difficulty. Alternatively, Financial Services could be regarded as an easier subject than Basic Economics, to which it has points of similarity."

It should be noted that NZTCI students could sit for the NZIM Management Diploma examination without having passed all the NZTCI course work. Some have passed the examination, in fact, without completing the NZTCI subject assignments, although they may have had the benefit of studying these assignments. A few such students could be included in those classified as "dropouts" in this study.

According to the National Office of the New Zealand Institute of Management, Inc., 5,695 candidates registered for the Supervision Certificate between January 1980 and November 9, 1982. During the primary period under study some 2,057 students registered 6,656 subjects with NZIM between November 16, 1981 and November 9, 1982. Of these subjects, 1,409 (or 21.2%) were studied through NZTCI. Some students studied a portion of their subjects at local teaching institutions and other subjects at NZTCI. NZIM's analysis of candidates sitting for November Management Diploma examinations showed 594 sat in 1980, 606 in 1981 and 666 in 1982. In 1980, 19.2 percent (114) took their tuition from NZTCI, in 1981, 21.3 percent (129), and in 1982, 20.4 percent (136) (NZIM, undated).

II. The Sample

The population of the study was defined as every student who had enrolled for NZTCI management tuition from 1980 through 1982. (Details of NZTCI management tuition can be found in Appendix A.) Student names and addresses were obtained from NZTCI records and every student in the population was sent a mail questionnaire to the address provided at the time of enrolment (See section on Questionnaire Development). The population included students who had completed their studies, current students and those who had begun study but who had subsequently dropped out. The efforts made to maximize the proportion of respondents are described in the next section. The final usable response rate was 76.9 percent (724 questionnaires).

We have chosen not to calculate sampling error, because random sampling techniques were not used. Moreover, the sampling error figure is often misinterpreted as the total error of the survey, when comparing the sample results to some "true" population value, whereas error can creep into a survey through many avenues, including response effects due to questionnaire wording, memory error, respondents giving socially acceptable answers, clerical error, etc. (Moser and Kalton, 1971; Sudman, 1976).

III. Response Rate

Nine hundred and ninety-eight questionnaires with a stamped, special delivery envelope were mailed on 19 March, 1983 to students who had enrolled in the NZTCI management courses from 1980 through to 1982. A deadline of 18 April was set for the questionnaire return. On 12 May, 1983, a reminder letter was mailed to those individuals who had not returned their questionnaires, asking for their cooperation in the study. The returns from those mailings produced 626 questionnaires. A second reminder letter, including a photocopied questionnaire, was sent in July, 1983 to those persons who still had not completed and mailed their questionnaires. This yielded an additional 98 responses, for a total of 724 usable questionnaires.

Forty-five mailings were not delivered to the NZTCI management students because they were not at the listed address and the mail could not be forwarded. Eleven of the non-returned questionnaires were mailed to prisoners, who subsequently were dropped from the study when it was determined that they had been released from prison and no forwarding addresses were available. It also became apparent that some prisoners took correspondence courses as a means of filling time and that they had no intention of finishing the course from the outset. Four individuals contacted refused, in writing, to participate in the study. One individual claimed to have completed and mailed a questionnaire and declined to do a second one. That left 213 persons who failed to respond to any mailings. We chose to eliminate the "no address" and prisoner mailings from the total in calculating the following summary of responses to the mail questionnaire:

Table 1
Response to Mail Questionnaire

	N	%
Total Questionnaires mailed (less invalid addresses & prisoners)	942	100.0
Usable Returns	724	76.9
(original questionnaire)	(626)	(66.5)
(photocopied questionnaire)	(98)	(10.4)
Non-respondents	213	22.6
Refused	4	0.4
Responses lost in the mail	1	0.1

The response rate, made up of usable returns from all three mailings, was 76.9 percent. This is high for a mail questionnaire.

Respondents were compared with 40 randomly selected non-respondents (of whom 3 did not give their age), in order to check on whether or not the respondent characteristics were representative. This was done by examining known characteristics of non-respondents as available in NZTCI records of enrollers. Checks were made on three variables: gender, age, and drop out rate. The following results were computed:

Table 2
Mail Questionnaire Respondents Compared with
40 Non-Respondents

	% Female & Number Reported	Average Age & Number Reported	% Dropouts/ Withdrawals & Number Reported
Respondents	22.9% N=724	32.6 N=722	34.3% N=724
Non-respondents	12.5% N=40	35.3 N= 37	17.5% N= 40

One-sample chi-square tests (Siegel,1956) were used to determine if respondent characteristics for each variable differed in a statistically significant sense from those of non-respondents. The results showed no significant differences for gender or age, ($p <.10$; $p <.70$). However, there was a significant difference between respondents and non-respondents for drop out rate, ($p <.02$). Significantly fewer dropouts were found among non-respondents. Another way of stating this is that dropouts were more likely to answer the mail questionnaire. (The reader is referred to the section on Bivariate Statistics on page 73 for an explanation of the statistical terms used in this report.)

IV. Questionnaire Development

A mail questionnaire was decided upon because the target respondents were spread throughout New Zealand and conducting face-to-face interviews would have been too expensive and time consuming. The development of the questionnaire grew out of the general study objectives. The researchers drew on their familiarity with the scholarly literature on the topics to be investigated, and their experience with distance education students (the NZTCI students taking the management course in particular), to determine the wording of the questionnaire. Early versions of the questionnaire were shared with colleagues at NZCER and NZTCI for trialling, critical comment, and revision.

The order of the questions was as follows:

Section 1: General Information
Section 2: Job/Work Commitments
Section 3: Reasons for Enrolling at NZTCI
Section 4: Study Period
Section 5: Attitudes to Study and Work
Section 6: Reasons for Withdrawal from NZTCI Study
Section 7: General Comments

Respondents began the questionnaire with easily answerable questions about themselves and then progressed in chronological order through the experiences of enrolment and participation in the course. Students who completed their studies ("persisters") did not answer Section 6.

There were 160-plus questions, most of which were "forced choice" or "closed-ended" but where appropriate, respondents were encouraged to amplify closed-ended responses with responses to open-ended follow-up questions. Section 5, "Attitudes To Study and Work", used a semantic differential format. That is, bipolar adjectives were listed after an appropriate phrase, and respondents were asked to circle the point which best reflected their opinion. The general format of this section was based on a previous study by Livingstone, Taylor and Norman (1984).

Respondents were guaranteed confidentiality and were asked to provide full and frank replies. The covering letter also informed respondents about the purpose of the survey, sponsoring details and the use to be made of the results. It stressed deadlines and provided a self-addressed and stamped delivery envelope. A name and address contact was also provided. (See Appendix B for copies of the original letter together with the two follow-up letters used on non-respondents. A copy of the questionnaire, can also be found in Appendix B.)

RESULTS

I. Characteristics of the Sample

The following tables provide information on those who responded to the questionnaire. All percentages are rounded out to one decimal place.

Table 3.1
Respondents by Gender

Gender	N	(%)	% NZ Pop. (1981)*
Male	558	(77)	49.7
Female	166	(23)	50.3
	72	(100)	100

* 1985 New Zealand Year Book

Table 3.2
Respondents by Age

Age	N	(%)	% NZ Pop.(1981)
Less than 20 years	14	(1.9)	36.4
20-29	268	(37.0)	16.2
30-39	309	(42.7)	13.7
40-49	102	(14.1)	10.1
40-59	28	(3.9)	9.6
60 years or more	2	(0.3)	14.0
Not given	1	(0.1)	
	724	(100)	100

Note: Average (Mean) age = 32.6 years.
* 1985 New Zealand Year Book

Table 3.3
Respondents by Gender and Age

Age	Male	(%)	Female	(%)	Total	(%)
Less than 20 years	6	(0.8)	8	(1.1)	14	(1.9)
20-29	202	(27.9)	66	(9.1)	268	(37.0)
30-39	258	(35.6)	51	(7.1)	309	(42.7)
40-49	74	(10.2)	28	(3.9)	102	(14.1)
50-59	15	(2.1)	13	(1.8)	28	(3.9)
60 years or more	2	(0.3)			2	(0.3)
Not given	1	(0.1)			1	(0.1)
Totals	558	(100)	166	(100)	724	(100)

X^2=25.15, df=4, p=.00005

Table 3.4
Respondents by Gender and Ethnic Group

Ethnicity	Male	Female	Both	(%)	% NZ Pop (1981)*
European	519	158	677	(93)	85.8
Maori	4	3	7	(1)	8.9
Pacific Islander	8	1	9	(1)	2.8
Other	23	3	26	(4)	1.3
No response	4	1	5	(1)	1.2
	558	166	724	(100)	100

* 1985 New Zealand Year Book

Table 3.5
Marital Status of Respondents by Gender

Marital Status	Male	(%)	Female	(%)	Both	(%)
Single	110	(15.2)	55	(7.6)	165	(22.8)
Married/de facto	419	(57.8)	88	(12.2)	507	(70.0)
Separated/divorced	23	(3.2)	20	(2.8)	43	(6.0)
Widowed	6	(0.8)	3	(0.4)	9	(1.2)
	558	(77)	166	(23)	724	(100)

$X^2=33.09$, df=3, p=.00001

Table 3.6
Respondents With Dependents by Gender

Response	Male	(%)	Female	(%)	Both	(%)
Yes	333	(46)	54	(7.5)	387	(53)
No	225	(31)	109	(12.2)	334	(46)
N/R			3	(0.4)	3	(1)
	558	(73)	166	(23)	724	(100

X^2=45.53, df=2, p=.00001

The above tables demonstrate that the sample does not reflect the demographic characteristics of the general New Zealand population. In terms of gender (further gender differences are embedded in the appropriate sections below), age, ethnicity, family status and responsibilities there are marked differences in the composition of students in the Management Department at NZTCI. The "typical" NZTCI NZIM correspondence student is a white male in his early 30's who is married and has dependents. Other "central tendencies" in the sample, as outlined below, tend to confirm this bias:

1. *Composition of Households (N=722)*

The majority of respondents households in the sample had three or fewer members: three persons (13.4%), two persons (24.5%), and one person (25.3%). Larger households were as follows: four persons (20.3%), five persons (13.1%), six or more persons (2.8%).

2. *Schooling (N=692)*

In nominating the highest school qualification achieved, well over half (60.0%) of respondents left secondary school with very creditable qualifications. Nearly six percent (5.8%) had been awarded Endorsed School Certificate, slightly over 11 percent (11.4%) held a Sixth Form Certificate, 21 percent had University

Entrance, twelve percent held Higher School Certificate and six percent had reached Bursary status. In addition, nearly four percent (3.8%) held comparable overseas qualifications.

A sizable proportion (40.0%) did not gain a sixth form qualification; however, nearly one fifth (17.5%) had stayed for three years of secondary schooling, another 19 percent had at least three School Certificate passes, and one percent had four School Certificate passes. Further, of those who had commercial/ secretarial training at school (N=101) there were three times as many women as men (p=.00001).

3. *Education Since School (N=473)*

Since leaving secondary school, just over 65 percent (65.3%) of respondents had acquired additional qualifications as follows: technician's certificate or equivalent, 33.4%; university degree or diploma, 21.0%, trade qualifications 14.5%; and advanced trade certificates, 5.9%. Slightly over 18 percent (18.4%) possessed professional qualifications and an advanced technical qualification.

4. *Time Since Schooling Finished (N=460)*

Over a third (34.4%) had been out of school or formal training, including tertiary training, for one to two years. For a small number (4.4%) there had been no appreciable gap between previous schooling and taking up studies with the NZTCI. Nearly 20 percent (19.8%), however, had finished their schooling three to five years previously, whilst 15.9% had been away for six to 10 years and 21.5 percent had been away from formal schooling for more than 10 years.

5. *Employment (N=717)*

Employment was as follows: supervisory roles, 39.9%; skilled areas, 20.2 percent; administrative positions, 18.6 percent; sales personnel positions, 7.4 percent; whilst unskilled jobs were at 2.6 percent. A tiny percentage (0.3%) worked in the rural sector and the balance (10.7%) worked in a variety of occupations.

6. *Employment Commitments (N=710)*

Over three-fifths of the sample (61.5%) were responsible for supervising or directing staff on a day-to-day basis. Men (65.7%)

were more likely to be in supervisory positions than women (46.9%) (p=.00001). On average they managed about 18 (mean=18.1) employees in their supervisory role. However, the range of staff numbers encompassed from one to 922 employees, with the median point at 5.5 employees.

7. *Hours of Employment (N=692)*

The average number of hours respondents worked on their main job was slightly more than 40 hours per week. The possible number of hours ranged from zero to 89 hours. Eighty-seven shift workers spent an average of 36.5 hours working each week, with a range of one to 80 hours. Nearly two hundred (197) workers regularly worked overtime, averaging 7.7 hours per week overtime, with a range of one to 30 hours. Fifty-six respondents worked in a second job, averaging 9.2 hours per week as secondary employment, with a range of one to 40 hours.

8. *Social and Leisure Commitments (N=701)*

A majority (72.4%) of respondents indicated that they pursued activities outside of work hours. Over one-third (37.8%) reported that they played sport, 11.9 percent indicated that spare time was devoted to a hobby, night class or "study", whilst nearly seven percent (6.6%) indicated that they had church commitments. Slightly more than one in twenty said they contributed time and energy to community or service organizations. Fewer (0.4%) indicated a commitment to a political organization. Only 2.5 percent cited "house or family commitments" but this is probably an underestimation. It probably would have been higher if respondents had been prompted for this query. Nearly 35 percent (34.9%) of respondents had non-work commitments: the average number of hours per week was 9.3, with the median of 6.5.

II. Reasons for Enrolling in NZIM Courses

Respondents were asked to indicate the strength of their motivation for enrolling in the NZIM/NZTCI courses, by selecting a point on a four point scale (ranging from "Very Important" to "Of No Importance") for each of nine possible reasons. In Table 4 the numbers responding to either "Very" or "Quite Important" are recorded.

Table 4:
Importance of Reasons for Enrolling in NZIM Course

Reasons	"Very" or "Quite" Important	
	N	(%)
Believed future career would benefit	686	(93.3)
Give better career prospects	675	(85.9)
Employer encouraged studies	657	(37.4)
Influence of family/friends	640	(22.2)
Prospect of salary increment	644	(19.6)
Fees/books/expenses reimbursed by employer	650	(13.5)
Compulsion from employer	648	(11.6)
Employer provided time off for study	640	(10.2)
Qualification part of award provision	639	(7.7)

1. *Other Motives (N=246)*

Enrollers also were given an opportunity to give other reasons not cited above. The most commonly offered major additional reason had to do with achieving personal satisfaction, advancement, self-esteem, enjoyment, improvement, or an interest in the subject (31.3%). Another popular reason was the course's help at work or value in career prospects (26%). Over 16 percent (16.7%) mentioned the goal of advancing general knowledge or completing another qualification. Nearly 14 percent (13.8%) said they wanted to keep their mind active or that they needed a challenge. Slightly over six percent (6.1%) named a change in their work or living situation. Over four percent (4.5) said they wanted to gain knowledge in a specific course area. Small percentages said they felt it was the only suitable course for their needs or that it was a prerequisite course (1.2%), or that it suited their hours of work (0.4%).

2. *Expectations of Course (N=630)*

Turning to their expectations of the NZTCI course when they enrolled, respondents made a number of open-ended responses. These expectations were classified as follows: further knowledge, technical competence, (22.3%); job promotion, use it at work, qualifications, (19.3%); hard course, require lots of time, difficulty in adjustment, (13.2%); could handle study involved, knew what to expect, (11.9%); theoretical support for practice, comprehensive, (8.7%); enjoyment, interest, challenge, self-improvement, self-esteem, stimulation, rewarding, (7.3%); easy, light, quick work, (4.9%); no expectations, didn't know, (6.3%). Combinations of several answers accounted for the remaining (1.7%) responses.

3. *Proximity to Educational Institute, and NZTCI Study (N=240)*

Nearly two-thirds (63.3%) of students over 29 years of age at the time of enrolling at NZTCI lived within 16 kilometres of a technical institute, polytechnic, or community college which offered alternative instruction towards NZIM. These individuals were asked why they chose to study with NZTCI. Almost two-fifths (37.1%) said they preferred to work at their own time and speed or cited the convenience and flexibility of NZTCI study. Another 16.3% said they were unable to take time from their work to attend classes. Nearly 14 percent (13.8%) said they had work-related travel which prevented attendance at a nearby institution. Nearly 13 percent (12.9%) noted the unsuitable hours at nearby institutions, or said they worked shift work. Another 8.8 percent said that a particular course was not available at a nearby institution. Some 6.7 percent cited family commitments as their reason. Another reason was to do with inability to get work leave or the fact that the respondents were in penal institutions (2.5%). Travel difficulties were cited by 2.1 percent. There were no discernable gender differences due to the small numbers in some of the chi-square contingency tables.

Respondents under 30 years of age, at the time of NZTCI enrolment, were asked the grounds (or reasons) on which they were granted exemption from attending an institution within 16 kilometers of their residence (N=176). About one-third (33%) noted they kept unsuitable hours or worked shift work. Some 21.6 percent cited work-related travel. Another 14.85 percent said they were unable to take time from work to attend classes. Particular courses appeared not to be available for 11.4 percent of these respondents. (Note: Some of these students may have been directed to NZTCI because there were insufficient courses at regional institutes. Editor.) Some 6.8% cited family commitments, while 4.5% cited travel difficulties or were prisoners. Four percent each named an inability to get leave from work or that they preferred to work at their own time and pace.

4. *The Enrolment Process and Postal System*

The overwhelming majority (91.9%) of the respondents said the initial enrolment information about NZTCI proved satisfactory (N=708). A similar percentage (92.7%) found the NZTCI postal system adequate for their needs (N=710).

However, those who found the mail delivery system inadequate (N=60) complained of excessive NZTCI delays and lengthy delays between assignments (63.3%), excessive postal delays (8.3%) or did not assess blame but expressed dissatisfaction (8.3%). The balance (20%) made miscellaneous comments.

Most respondents (N=575) found the mailed assignment turnaround time sufficient for their needs (83.3%). Those who did not find the turnaround time sufficient (N=115) said that the usual period for an assignment to be returned was two to four weeks (64.8%), one to two months (18%), less than two weeks (14.1%), or more than two months (2.3%).

III. Methods of Study

1. *Time Spent Studying*

The majority of students spent less than eight hours studying and responding to each assignment (less than six hours, 23.8%; six to eight hours, 38.2%). Over a quarter (25.5%) spent from eight to 10 hours and 12.4 percent spent over 10 hours with each assignment (N=693). Less time was spent on background reading or extra study when answering an assignment (63.7%, up to three hours; 15.4%, from three to six hours; 2.9%, over six hours). However, 18% spent no extra background or study time on answering their assignment. There were significant sex differences in background reading habits with women tending to more reading than men (p=.05) (N=694). The majority said they were able to answer each test paper in an assignment in less than four hours (34.2 percent from three to four hours; 29.1 percent up to three hours). Over a fifth (23.2%) spent from four to five hours on the task, and 12.9 percent spent more than five hours. (N=677).

2. *Time Alloted To Subjects (N=540, N=543)*

Supervision Certificate core module assignments were perceived to take the least time by respondents nominating management subjects (mean, 9.29%). Over half (55.7 %) of subjects nominated came from this category. As a group, Management Diploma subject assignments were the most frequently cited as taking the least amount of time (mean, 2.44%). Altogether, 14.6 percent subjects nominated came from this category.

Supervision Certificate elective subjects were rarely nominated as taking the least amount of time (mean, 1.9%). Two exceptions were Basic Statistics (5.7%) and Introductory Accounting (4.1%). Supervision Certificate module electives were named by 13.5 percent of the respondents. Another 16.1 percent were unable to specify a subject, felt the subject assignment completion times were much the same, had taken only one subject and couldn't respond meaningfully to the question, couldn't remember, or hadn't started their studies at the time of completing the questionnaire.

Supervision Certificate core module assignments also were perceived to take the most time by respondents nominating management subjects (mean, 7.5%). Of course, more respondents probably took these courses than others. Slightly more than 45 percent (45.2%) of the module assignments nominated were found in these six modules.

Supervision Certificate elective modules were named as taking most time much less frequently (mean, 3.5%) although Introductory Accounting, was cited often (10%), followed by Elementary Economics (8.4%) and Business Administration (1.1%). The remaining electives were cited by less than one percent of the respondents as taking the most time.

Management Diploma subjects as a group were nominated by an average of 3.2 percent of the respondents. Most time consuming among these subjects was Financial Principles and Controls (5.6%), Organization and Management (4.6%), followed by Financial Management (4.1%). Almost 15 percent of respondents said they were unable to say which subject assignments took the most time, or gave an unclassifiable response such as: "much the same", "can't remember", "only took one subject", "haven't started yet".

IV. Tuition and Tutor Evaluation

1. *Praise and Criticisms*

A large majority of respondents (N=582; 80.4%) said comments returned by tutors of the course assignments generally were helpful for each of the subjects studied. A very small group (2.1%) said tutor comments generally were not helpful in all subjects studied. Some subjects tutored were perceived as yielding less helpful comments than others. Respondents made 136 critical comments about specific subjects.

Introduction to Supervision and Elementary Business Law were singled out most often for criticism (11.8% each). These were followed by Financial Principles and Controls (11%), General Administration (10.3%), Introduction to Accounting (9.6%), Labour Relations (8.8%), Marketing (5.2%), Staff Development (5.1%), Communication and Organization and Management (4.4% each), Financial Management and Industrial Administration (3.7% each), Elementary Economics and General Economics (2.9% each), Management Services and Business Administration (1.5% each), Basic Statistics and Local Authority Administration (0.7% each).

When respondents appeared critical of subjects, their criticisms tended to focus on the figure of the tutor, with most (84.2%) of adverse comments directed this way. Criticisms included negative responses to tutor comments, especially those that were accused of inadequate substance (34.1%), illegibility of comments (16.7%), too many tutors, or differing tutors for one subject, with variations in standards (6.1%), dogmatic or inflexible tutors (2.3%), and tutors who returned assignments without accompanying explanations (0.8%).

There were a number of criticisms which did not seem to be exclusively tutor related, such as: poor standard of material in assignments (5.3%); too great an expectation of prior knowledge or time commitments (4.5%); subject was too demanding or too complicated (3%); or objections to questions which demanded no more than direct copying from textbooks (3%).

2. *Correspondence Tuition*

A seven-point semantic differential scale was utilized in order to test the effectiveness of tuition by correspondence. Such tuition was perceived as more "interesting" than "boring" (mean 4.98), more "rewarding" than "frustrating" (4.88), more "unhurried" than "hurried" (4.58), about as "easy-going" as "strict" (4.02), and midway between "easy" and "difficult" (2.94). Furthermore, respondents rated correspondence tuition as slightly more "tiring" than "not tiring" (3.88), more "pleasant" than "unpleasant" (2.89), more "friendly" than "unfriendly" (2.7), more "useful" than "useless" (2.39), and more organized" than "disorganized" (2.2). The numbers responding varied between 670 and 675 respondents.

3. *Assignments*

Using another semantic differential scale, respondents judged NZTCI assignments as more "readable" than "unreadable" (mean 5.36), more "helpful" than "unhelpful" (5.41), slightly more "specific" than "general" (4.19), slightly more "concise" than "wordy" (4.08), and midway between "technical" and "non-technical" (4.0). In addition, assignments were considered to be "longer" rather than "shorter" (3.57), and more "up-to-date" than "out-of-date" (3.0), more "interesting" than "uninteresting" (2.43), more "relevant" than "irrelevant" (2.32), and more "organized" than "disorganized". The gender differences that showed up indicated that women tended to find the assignments more "interesting" (p=.03) and "up-to-date" (p=.002) than men. The numbers responding varied between 682 and 691.

V. Employment and Study

Another semantic differential scale was used to evaluate the relationship between NZTCI study and respondents' employment. Respondents perceived their jobs to be more "interesting" than "boring" (mean 5.3), more "rewarding" than "frustrating" (4.41), more "difficult" than "easy" (4.34), more "strict" than "easy-going" (3.9), and more "hurried" than "unhurried" (3.5). In addition, respondents perceived their jobs to be more "tiring" than "non-tiring" (3.29), more "pleasant" than "unpleasant" (2.9), more "organized" than "disorganized" (2.94), more "friendly" than "unfriendly" (2.69), and more "useful" than "useless" (2.51). A gender difference was discernible with women finding jobs in relation to their study as more "interesting" than men (p=.03).

A considerable proportion of respondents had experienced some variety of change within their place of employment during their NZIM study period (43.8%). Changes (N=274) included promotion, increased responsibility (68.6%), transfers or other changes (31%), or new experiences with equipment (0.4%).

More than a quarter (25.3%) had changed employment or employer during their study period. These changes (N=153) included transfers or vocational moves (57.7%), moves to better positions or careers (34%), redundancy (3.9%), dismissals or resignations (2%), bankruptcy (0.7%), or changes due to family circumstances (0.7%).

VI. Other Activities and Study

While studying with NZTCI, 30.3 percent of respondents took an overseas trip, 15.6 percent had children, 12 percent got married or took up cohabitation, 7.3 percent suffered a serious illness, 6.25 percent had dependents come to stay with them permanently, 4.7 percent got divorced or separated, and 4.1 percent got selected for provincial or national sports teams (N=665). While all these can be considered distractions from study some affected one sex more than the other. For example, women were more distracted by divorce/separation (p=.04) and serious illness (p=.02) than men who named having children (p=.0001) and being selected for provincial/national sports teams (p=.05) as their biggest distractions.

Other distractions volunteered by 346 respondents included a series of underestimations: of job time, work load, and travel time (34.3%); of other activities and commitments (9.5%); of total study load (5.8%); of family commitments (5.5%) and of level of commitment and motivation (1.7%). Other distractions also included new part-time ventures (13%), significant changes in family health, marital, financial or related circumstances (5.5%) (obviously related to above explanations), and unforeseen changes in job situation (3.2%).

VII. Attitudes to Alternative Educational Technology

Respondents were asked a series of questions concerning the desirability of incorporating face-to-face seminars and educational technologies into NZTCI study. Table 5 gives an account of the number of positive responses to these questions.

Table 5:
Positive Reactions to Use of Alternative Educational Technology in NZIM Studies

Would make use of:	N	"Yes"(%)
Attendance at seminars *	691	(81.6)
Radio and/or television study aids *	672	(57.5)
Limited telephone tutoring	680	(54.3)
Audio tape supplements *	659	(34.3)
Telephoned rather than written comments from tutors	675	(20.4)

If the respondents answered "yes" to the starred questions in Table 5 then further responses were elicited as follows:

1. *Seminars*

Those who indicated that they favoured seminars as an aid in their studies were asked where and when they would be willing to attend a seminar at their own expense. Nearly eighty percent (79.2%, N=576) indicated they would attend a two or three day seminar only if it were held close to where they lived, whilst 40.7 percent (N=555) would attend one in Wellington. Nearly fifty-five percent (54.75, N=534) favoured seminars held at weekends, whilst 44.2 percent (N=520) favoured weekdays.

2. *A Radio and/or Television Study Aids*

Over a quarter (25.3%) of those indicating that they would make use of radio or television commented that such media were a better, more absorbing means of learning. Others noted that radio or television could provide "live" case studies, interviews, practical examples, or alternatives to the tutor's viewpoint (24.7%). Other responses were as follows: television and/or radio could provide supplementary information or exam summaries (23%); could provide supplementary explanations (11.5%); offer a varied method of presentation which is more interesting and easier than print learning (9.8%); could reduce a sense of "learning alone" and bring the student closer to the classroom (3.7%); requires set study periods and increases application to study (1.7%); or could offer increased flexibility (0.3%).

3. *Audio Tape Supplements*

Those respondents who indicated that they would make use of audio tapes were asked what use they would put these to. Over forty percent (N=203) said they would use them as supplementary information and/or background, whilst other responses were: supplementary explanation (22.2%); personalization of tutoring, better student-tutor communication, question-and-answer exchange, or exchange of comments (11.8%). Other respondents said tapes could be used for case studies, interviews, and practical examples (12.8%); or it was seen as a "superior" method of teaching and learning (6.9%); or it provided an attractive and more interesting alternative to reading (5.9%). There was a gender difference in that men were more strongly disposed to receive supplementary information by audio tape than women ($p=.05$).

VIII. Assessments of NZIM Course

1. *'Praise'*

Over forty percent (40.9%) of respondents (N=403) commented that the course had matched their expectations or had proven to be as good as they expected. Over fourteen percent (14.4%) indicated that it was better than they expected, whilst 8.7% indicated that it "differed" from their expectations but did not point to whether this deviation was for good or ill.

2. *'Criticisms'*

Nearly eighteen percent (17.6%) of those responding (N=403) criticized the course for not being as good as they had expected or because it was not of much use, or because it required more time or more work than expected, or was more difficult or worse than expected (16.4%). Two percent could not "cope" with the course.

3. *'Explanations For Withdrawal'*

All respondents were given an opportunity to respond to an open-ended question which asked for responses which would "aid us in our survey to understand what students require from NZTCI courses and why some withdraw before completing". Three hundred and thirty-three responses were recorded, with thirty-eight respondents providing more than one response. Common responses are given in Table 6:

Table 6:
Explanations for Withdrawal (N=295)

Explanations	(%)
Course materials need updating, improvements or checks for accuracy, or expansion	(24.0)
More tutor contact, seminars and backup resources needed	(14.7)
Various tutor-related complaints (e.g. inconsistency, remarks too harsh)	(9.6)
More incentives or information (e.g. reminders of work due)	(9.0)
More information on course length or content	(8.7)
Increased acknowledgement from employers or more relevance to employment	(8.1)
Too much work, or too hard	(6.3)
Too much repetition across subjects	(6.0)
Required answers too long or wordy	(4.8)
Timing of assignments unsatisfactory	(4.8)
More time needed for assignments	(1.8)
Too high expectations of prior knowledge	(1.5)
Abolish examinations	(0.7)
	(100.0)

IX. Withdrawal from NZIM Course

Table 1 on page 49 shows that 34.3 percent (N=248) of respondents withdrew or ceased their studies with NZTCI. Of these, seventy-two had previous experience of dropping out from a course of study undertaken before their NZTCI experience. Analysis of responses are as follows:

1. *Reasons for Withdrawal*

Fifteen possible reasons for drop out were listed in the questionnaire. These reasons were based on a review of relevant literature, as well as the personal experiences of the staff of the Management Department of NZTCI and the authors of this study. Five responses were provided: "very important", "quite important", "of little importance", "of no importance" and "not applicable". The mean of all responses to each question (on a scale of 1 = "very important" to 4 = "of no importance"), together with the percentage of reasons that were applicable, follow: voluntary change from NZTCI to day institute 2.00, 16.6%; unavailability of study materials 2.03, 48.1%; changed job 2.13, 35.3%; personal problems 2.42, 47.7%; illness 2.46, 33.7%; took course/subjects for interest only 2.46, 71.0%; went overseas 2.51, 17.8%; lack of adequate tutor assistance 2.89, 54.3%; general dissatisfaction with correspondence study 2.91, 58.1%; course or subjects too difficult 2.99, 63.5%; compulsory change of system of study (from NZTCI to day institute) 3.12, 10.8%; course or subject material irrelevant or outdated 3.17, 65.0%; difficulty of reading materials 3.28, 50.4%; administrative problems (e.g., posting) 3.47, 40.0%; lack of time 3.98, 82.5%. There were gender differences in two areas: women tended to withdraw more for reasons associated with personal problems (p=.04) and lack of tutor assistance (p=.01) than did men.

In addition to indicating how relevant the reasons cited above were, respondents described what aspects of study with the NZTCI gave them the most trouble prior to their withdrawal. Twenty-six respondents described the following adverse circumstances: lack of knowledge of examples used, unable to relate to work; script turnabout time too slow; objections to required answers, boring presentation, overly academic reasoning; assignments ceased arriving if previous scripts not submitted; employer's negative attitude or employer didn't recognize course; course discontinued; dissatisfaction with course relevance.

An additional open-ended question asked respondents to state what actions would have helped to continue their studies. Sixty leavers suggested seven general areas of assistance: more personalized tuition, help, or seminars; better or clearer questions, more flexibility, more information; more interesting assignments or incentives to complete them; more time or relaxation of the 10-week rule; examinations at the end of the learning process irrespective of the academic schedule; more assignments delivered simultaneously; and exemption from course work already covered elsewhere.

2. *Subjects Completed Before Withdrawal*

Those students who had withdrawn from studies before completion of all course requirements were asked to supply information about subjects they had succeeded in completing and the year in which the subjects had been completed. Up to six subjects were coded for each respondent.

Although numbers were small, four subjects stood out as those most likely to be completed. They were: Introduction to Supervision, Labour Relations, General Administration, and Staff Development. One hundred and sixty-one subjects were reported completed by the 248 dropouts, for an average of less than one subject per dropout (mean, 0.65). The period 1980 through 1982 accounted for the bulk of years in which subjects were completed (86.9%).

3. *Subjects Not Completed Before Withdrawal*

Those individuals who had withdrawn from the NZIM course were asked what subject or subjects they had withdrawn from before completing the appropriate study programme. They were also asked to supply reasons why they did not complete their studies. Up to three subjects were coded for each respondent.

Again numbers were small but the subject ahead of all the others was Introduction to Supervision. There was a considerable spread of subjects not completed before withdrawal took place while the large majority of students in the present study withdrew in 1982 (78.8%).

The reasons for withdrawal were numerous but the majority centered around time constraints and the difficulty of subject content. Obviously these categories may not be mutually exclusive, with a combination of factors influencing decisions to withdraw from studies. When reasons were given, "Lack of time" stood out above all other subjects followed some way back by "Too hard" and then "Pursued other interests or courses".

4. *Overseas Travel as a Factor in Drop Out*

Thirty-one respondents indicated that overseas travel during their study period had some influence on their decision to withdraw from studies. Fourteen travelled for business reasons and fourteen for pleasure. Just over half were overseas for less than six months and one in five for more than a year. Forty-two percent said they were not aware that they could have arranged to continue their NZTCI studies while overseas. (Note that the numbers do not quite add up to N= 31 because of respondent inconsistencies.)

5. *Employment as a Factor in Drop Out*

A quarter of all dropouts said that unhappiness with their employment had affected their NZIM studies. Almost a third said they were unable to "apply" course work at their place of employment largely because incentives were absent. A quarter said they were unhappy with the structure or politics at their work place. Just over a fifth said their employers were totally unsympathetic or unsupportive of their NZIM studies. A few (12.5%) said their work was uncertain and 9.4 percent said they were frustrated or lacked stimulation in their employment.

6. *Return to Studies*

Nearly two thirds (65.3%) of those who had dropped out of their NZIM studies said that they were planning to resume studies in the future.

STATISTICAL ANALYSIS OF FACTORS INFLUENCING PERSISTENCE OR DROP OUT IN THE NZIM CORRESPONDENCE COURSE

I. Bivariate Statistics

The review of literature provides an academic background which justifies the inclusion of many of the variables measured in this study. However, given the large number of variables which have been proposed as possible predictors (independent variables) of drop out/persistence, and given the relative lack of relevant work in New Zealand, (as well as the total absence of relevant work done at the NZTCI), the authors chose not to propose formal hypotheses for testing. Rather, the research was considered to be exploratory. While it is possible to suggest formal hypotheses based on the academic literature, the authors were more interested in testing a large number of independent variables to see if they might be related to the dependent variable of drop out/persistence. The first step was to formulate a comprehensive number of cross-tabulations and to calculate associated statistics, such as chi-square, probabilities, phi (for 2x2 tables), and Cramer's V (for larger tables) (Hays, 1973). Most of the variables were measured at the nominal or ordinal levels, so nonparametric statistics were selected as most appropriate for this phase of the analysis.

The chi-square test (X^2) is used to determine the significance of difference among k independent groups. The associated significance gives an indication of the extent to which the observed distribution of respondent data found in the table cells differs from what would be expected, given the marginal distributions. The greater the difference between observed frequencies and expected frequencies, the larger chi-square will be and the smaller the significance level will be. When chi-square is large and the significance level is equal to .05, there is a one in 20 chance that the observed distribution of observations could have varied from the expected distribution by chance alone. When this happens the usual research decision is to reject the possibility that the two variables in the table are independent of one another (not related), and to accept what appears to be a dependent relationship. The magnitude of this relationship is measured with phi or Cramer's V, both of which range from 0.00 (no relationship) to 1.0 (a perfect relationship). Cell data are inspected to determine the direction of the relationship, if a one-tailed test of statistical significance is appropriate. In some cases when a two-tailed test was close to, but not quite equal to or less than .05, we also have given the one-tailed test (which halves the two-tailed test) if the direction of the observed data were in the direction suggested by the review of the literature (Siegel, 1956).

Cross-tabulation responses of the procedures and tests of statistical significance were performed on the 476 (65.8%) respondents who persisted in their NZTCI management course study and on the 248 (34.3%) responses of the respondents who reported that they had discontinued their studies. The data retrieved from these procedures were considerable. Thus what follows is the briefest of summaries of the data.

Details of results have been dropped, (except for column percentages and in some cases the appropriate Table's total N), together with the probability statistic if the relationship reported approached the p=.05 level or greater. Full tables and figures are provided in Appendix C for those who seek more detailed information than supplied below. Nevertheless, the information that follows effectively highlights all the salient features revealed by the appropriate statistical applications.

1. *Demographic Independent Variables*

* There was no significant gender association with drop out rate (N=719; p=.06),nor was there an ethnic association (N=719; p=.06) although both variables were close to the recognized criterion of significance for studies of this kind (i.e., p=.05 or higher).

* Respondents who had dependents were somewhat more likely to drop out (36.4%) than those who did not have dependents (31.2%), (N=720; p=.07).

* Those respondents who had five or more persons in their household (38.7%) were somewhat more likely to drop out than those with four and fewer occupants (33.4%) (N=723; p=.14).

* The level of secondary schooling achieved by respondents did not relate to drop out rate from the NZTCI management course (N=692; p=.78).

* The highest drop out rate (42.3%) was among the twenty-six respondents who held an overseas qualification, whilst the lowest drop out rate was recorded amongst those who held an Endorsed School Certificate (25%). Respondents who had commercial, secretarial or trade qualification, upon leaving secondary school (40.6%), had a somewhat higher drop out rate than respondents who had not acquired such qualifications (33.1%) (N=715; p=.07).

* There was no relationship between types of qualifications acquired since leaving secondary school, and drop out rate (N=723; p=.56), except for those with trade qualifications and/or advanced trade qualifications who exhibited a somewhat higher but still non- significant drop out rate.

* There was a tendency for respondents who had not been involved in formal studies for the longest periods before taking up NZTCI correspondence to have higher drop out rates than those who experienced a shorter period between study (N=724; p=.06). For example, those who had been out of school for three to ten years recorded a drop out rate of 40.3 percent, compared with 26.7 percent for those whose formal education had been as recent as two years previous.

* There were relationships between mode of occupation and drop out rate. Table 7 has the details.

Table 7:
Drop Out by Mode of Occupation (N=717)

N (Col.%)	Superv.	Admin.	Skilled	SalesPer.	Unskill.	Other
Persist.	176 (61.32)	102 (76.12)	99 (68.28)	31 (58.49)	11 (57.89)	53 (67.09)
Dropouts.	111 (38.68)	32 (23.88)	46 (31.72)	22 (41.51)	8 (42.11)	26 (32.91)

X^2=11.26; 5 df; p=.05, two-tailed; Cramer's V=.13

Those in unskilled, sales, personnel and supervisory occupations had the highest drop out rates. Respondents in administrative, skilled and other occupations (including farming) had the lowest drop out rates (N=717; p=.05).

* There was no difference in drop out rates between respondents who were responsible for supervising or directing staff on a day-to-day basis, and those who did not have such responsibilities (N=710; p=.80). Nor did the number of staff being supervised have any bearing on drop out (N=724; p=.80).

* Overall, the number of hours worked per week in respondents' main occupation had no effect on drop out (N=724; p=.34). However, a group that worked long to abnormally long hours (41-89 hours per week) did exhibit a higher drop out rate than others (39.3%). There was a tendency for those who utilized shift work to drop out in greater proportions (41.4%) than those who worked conventional hours (33.3%) (N=724; p=.07), yet there was no relationship with the amount of overtime worked (N=724; N=724; p=.54). However, there was a relationship between drop out and secondary work. Dropouts were more likely to have secondary employment than those who continued with their study courses (N=724; p=.04).

* Drop out rate was not affected by positive employer attitudes to study, encouragement or financial assistance (N=648; p=.38), (N=657; p=.44), (N=650; p=.72). Drop out rate for the group allowed time off to study did not differ from the rate for those who were not allowed time off (p=.99).

* Respondents who changed positions within their work-place were no more likely to drop out than those who remained static (N=648; p=.97). However, respondents who changed job and/or employer during their study period had a higher drop out rate (N=68; 40.96%) than those who had remained with the same employer (N=153; 31.22%), (p=.02). In addition, comments by respondents in the open-ended section of the questionnaire gave further support to these results.

* Dropouts tended to rate their jobs less positively than persisters. They saw their jobs as more unpleasant (p = .01), more disorganized (p=.01), more frustrating (p =.01), more tiring (p=.05) and more hurried (p=.01). However, with other job-related attitudes,

(boring/interesting, easy/difficult, strict/easy-going, friendly/unfriendly, useful/useless), there was no significant differentiation between dropouts and persisters.

* Direct or tangible job-related inducements to complete management studies, such as future salary increases, or the need to fulfil an award provision, did not appear to have much effect on drop out rate.

* Intangible or deferred rewards stemming from the acquisition of NZIM qualifications was a factor in course persistence. For example, respondents who said that the decision to study was influenced by the prospect of a career boost were more likely to persist (67.2%) than those who said such a consideration was of little or no importance (60%), (N=675; p=.08). Similarly, those who chose to study for career considerations had a lower drop out rate (33.3%) than those who said such reasons were of little or no importance (44.4%) (N=686; p=.06).

* Recreational activities and the amount of time committed to them did not appear to have much effect on drop out rates. Those who had recreational commitments outside of working hours were only slightly more likely to persist in their studies (66.5%) than those without such commitments (64.8%), (N=701; p=.66). Those who spent a greater amount of time (6-10 hours) on recreation were more likely to persist (71.2%) than those who spent less time (1-5 hours; 65.5%, nil hours; 62.%), or more time (11 hours or more; 64.9%), but the overall table was not statistically significant (N=724; p=.28).

* The nature of recreational activity, however, did have some effect on drop out rates. Those engaged in church, community service, or political organizations had a slightly higher drop out rate (42.2%) than those with no recreational commitments (38.2%), those who devoted their recreation time to home pursuits or hobbies (28.4%), or those with outside sports commitments (28.4%). Even so the differences were not significant (N=723; p=.11).

* The proximity of respondents' place of residence to the nearest management study course appeared to have no significant influence on drop out rate. There was a slight tendency for students who were aged 30 years or older, at the time of their enrolment at the NZTCI,

and who lived within 16 kilometres of a technical institute, polytechnic, or community college which offered alternative means of instruction, to drop out (36.7%) when compared to those living greater distances from such institutions (30.1%) (N=417; p=.17).

2. *Social Interaction Variables*

* Interpersonal communication influences (that is, the influence of family, relatives, or close friends) did not appear to be a significant influence on respondents' decision to take up study. Respondents who indicated that these interpersonal influences were "very-", or "quite-important" were only slightly less likely to discontinue their studies (31.7%), than those who said such influences were of little or no importance (34.7%), (N=640; p=.56).

* Getting married, or taking up cohabitation, during the period of study had little real effect on persisting or dropping out. Divorce or separation during the same period also did not seem to be a significant factor.

* Having children during the period of study did not appear to increase the likelihood of drop out. Similarly, having dependents come to live in the household did not appear to significantly affect drop out rates.

* Selection for a provincial or national sports team, during the period of study, did not seem to have any significant effect on drop out.

* Those who travelled overseas during the period of study seemed to be less likely to drop out (29.6%) than those who did not venture out of New Zealand during the same period (36.8%) (N=671; p=.07).

3. *Psychological or Intrapersonal Variables*

* The level of students' expectations, and clarity of their study goals, appeared to have had an influence on their application to study. Those students who had vague expectations when they first enrolled, (e.g. did not know what to expect) were more likely to discontinue their studies (39.02%), than those students who had one or more of the following expectations: easy, light, quick work, enjoyable, interesting, challenging, stimulating, rewarding, self-improving, self-esteem enhancing, broadening of knowledge or

technical competence (35.47%). The respondents who expected study to lead to job promotions, or other work-related career events, had an even lower drop out rate (34.96%). Least prone to dropping out were those who thought the course would be one or more of the following: hard, would take lots of time, would lead to difficulties in personal adjustment, would offer tuition by one tutor, would be well-planned, would offer quick marking, would be comprehensive, or would provide theoretical support for their jobs in practice (23.03%) (N=625; p=.03).

* To what extent were expectations about the course fulfilled? Respondents who considered that their course of study had matched the expectations they held at their time of enrolment (i.e. as good as, or better than expected), were much less likely to drop out (21.97%), than those who had lower expectations, (i.e. course was not as good or as worthwhile as expected, required more work and time, or was more difficult than expected) (52.22%), (N=403; p=.001).

* Students who suffered serious illness during their study period showed only a slight trend to discontinue (37.5%), more than those who had no serious health problems (33.9%). The difference was not significant (N=662; p=.61).

* The amount of time spent on studies was an important consideration in the level of persistence. See Table 8 for the details.

Table 8:
Drop Out and Time Spent on Each Assignment (N=693)

N	Number of Hours		
(Col.%)	Under 6	6 - 8	8+
Persisters	93 (56.56)	190 (71.70)	186 (70.72)
Dropouts	72 (43.64)	75 (28.30)	77 (29.28)

X^2=12.73; 2df; p=.002, two-tailed; Cramer's V=.14

Those who devoted a greater amount of time to study generally persisted with their course : eight or more hours (70.72%); six to eight hours (71.70%); whilst those who allocated fewer than six hours persisted at a rate of 65.5 percent (N=693; p=.002).

* Those who spent a greater amount of time on background reading or preparation for answering an assignment had a lower drop out rate. The rate for those who spent three or more hours (N=127) was 28.35 percent, and those who spent up to three hours (N=442) was 30.09 percent, whilst those who devoted nil time to such extra study (N=125) recorded a comparatively high 44.80 percent (N=694; p=.005).

* The amount of time spent on answering the test papers in assignments was a factor in drop out. The shorter the time spent on answering tests and assignments, the greater the likelihood of drop out. Those who spent, on average, four or more hours (N=246) recorded 27.6 percent drop out; three to four hours (N=233), 30.9 percent; and up to three hours (N=198), 37.4 percent (N=677; p=.04).

4. Institutional Variables

Although it is nearly impossible to separate these variables in their entirety, the four general influences on drop out (demography, social interaction, psychology, intrapersonal phenomena and institutional aspects), it is possible to focus, to some extent, on those variables over which the NZTCI has some control such as assignments and tutor responses.

* Recall by students about whether initial enrolment information from the NZTCI was adequate, was not a predictor of drop out. Those who considered such materials were adequate had a drop out rate of 33.6 percent, whilst those who considered them inadequate recorded 38.6 percent, (N=708; p=.45).

* There appeared to be no significant difference between those who considered the NZTCI mail delivery system to be adequate for their needs (65.7%), and those who deemed it inadequate (70.6%), (N=710; p=.48). However, those respondents who perceived the mailed assignment turnaround time to be unsatisfactory (N=115) had a higher drop out rate (39.1%), than those (N=575) who were satisfied (30.96%), (N=690; p=.04).

For those who were dissatisfied with turnaround times, drop out increased if turnaround time was longer than one month (N=26), 65.38 percent; 2-4 weeks (N=83), 32.53 percent; less than two weeks (N=18), 33.33 percent (N=127; p=.01).

* Respondents' assessments of attitudes to assignments showed differences between persisters and dropouts. Students who dropped out (N=200) were less likely than persisters (N=436) to say that assignments were relevant (p=.05), organized (p=.05), interesting (p=.09), readable (p=.05), helpful (p=.0001), specific (p=.02) and concise (p=.07). There was no difference between the groups in their attitudes to the technical nature of assignments, their length, or whether they were up-to-date or not.

* In evaluating NZTCI correspondence "tuition" using a semantic differential scale, students who had dropped out were more critical than persisters on 8 out of 10 variables, as shown in Table 9.

Table 9:
Drop Out and Significant Attitudes to NZTCI Tuition

Negative Pole	Dropouts (N=204)	Persisters (N=423)	Significance Level
"disorganized"	5.7	6.0	.0001
"useless"	5.5	5.8	.0002
"unfriendly"	5.3	5.7	.0001
"unpleasant"	5.1	5.5	.0001
"boring"	4.7	5.1	.0004
"hurried"	4.4	4.7	.03
"frustrating"	4.3	5.2	.0001
"tiring"	3.6	4.0	.001

The two adjectival pairs that persisters and dropouts showed no significant differences on were the "strict/easy going" and "easy/difficult" dimensions.

* Respondents' perceptions of subjects in which assignments took the *least* time and the *most* time also appeared to be related to drop out rate. For subject assignments which took the least time,

respondents who were unable to say; thought they were much the same; couldn't remember; had only taken one subject or hadn't started, had a higher drop out rate (39.08%) than respondents citing a Management Diploma subject (31.65%), Supervision Certificate core module (25.58%), or Supervision Certificate elective module (12.33%) (N=540; p=.001).

* Respondents who were unable to state which subject assignments took the *most* time, or thought they were much the same, who could not remember, had not started or had taken only one subject, had a higher drop out rate (41.25%), than respondents citing a Management Diploma subject (28.43%), or a Supervision Certificate elective module (15.04%), (N=537; p=.0009).

* Respondents were asked to assess the helpfulness of tutor comments on the assignments in the modules, or subjects, they studied. Fifty-five respondents listed at least one negative (i.e., unhelpful) tutor comment during a Supervision Certificate core module. However, these respondents did not display a higher drop out rate (34.6%), than those who did not make such assessments (34.2%), (N=724; p=.96). In addition, twenty-five respondents listed at least one negative assessment of tutor comments during Supervision Certificate elective modules. However, drop out was not related to such negative appraisals; in fact their drop out rate was lower (24%), than for those who did not venture such appraisals (34.6%), (N=724; p=.27). Thirty-three respondents made at least one negative assessment of tutor comments during Management Diploma subjects, but the relationship between critical drop out respondents (39.4%), and uncritical respondents (34%), was not significant (N=724; p=.52).

* Viewed from a different perspective, however, the data revealed a more significant relationship regarding the helpfulness of tutor comments. Of the respondents who made at least one criticism of unhelpful tutor comments on any module or subject (N=222), 105 (47.30%) dropped out. On the other hand, of those who made no criticisms (N=502), 143 (28.49%) dropped out (N=724; p=.0001).

* Critical open-ended appraisals of tutors' negative comments were too few to apply a statistical test, but percentages showed a tendency for those who complained (e.g. discouraging comments, illegible handwriting, too dogmatic), to have a higher drop out rate

(33%). There was a similar drop out rate for those who had criticisms of the quality of assignments, or objected to having to learn by rote (33.3%) yet those who felt that subjects, or tutors, were too demanding had a much lower drop out rate (11.1%).

* Respondents who considered that written correspondence material should be supplemented with audio-taped material (N=226) had a higher drop out rate (37.17%), than the drop out rate (28.18%) for those who disagreed (N=433), (N=659; p=.05).

* Respondents who agreed that telephoned comments from tutors would be preferable to written comments on their work (N=138) had higher drop out rates (38.41%), than those who disagreed (N=537) for whom the drop out rate was 29.42% (N=675; p=.04).

* Respondents who agreed that a limited amount of telephone tutoring, during their course of study, would be beneficial, had a higher drop out rate (34.69%), than those who were content with the status quo (N=537) whose drop out rate was 27.65% (N=680; p=.05).

* Respondents who considered that attendance at a seminar, held in conjunction with their studies, would be beneficial (N=564) had a higher drop out rate (34.75%), than those (N=127) whose drop out rate was 25.2% and who did not share this belief (N=691; p=.04).

* There was no significant difference in drop out rate between those who desired radio or television supplements to their studies (33.9%), and those who did not (31%), (N=671; p=.30).

II. Multiple Linear Regression Tests

The next step in the data analysis was to examine the simultaneous effect of a number of independent variables on the dependent variable (drop out or persistence in the NZTCI management courses).* The foregoing analysis identified many variables which

* An "independent" variable is the variable that is manipulated experimentally and is sometimes referred to as the "experimental" or "treatment" variable. On the other hand the "dependent" variable is the variable that is measured to determine the effects of an experimental treatment and is sometimes called the "post-test" or "criterion" variable.

individually had some degree of relationship to the dependent variable. The aims of multiple linear regression, the technique we employed next (SAS Institute Inc., 1982; Williams, 1979) are: (1) to develop a formula for the practical prediction of a dependent variable from independent variables; (2) to see if the prediction is greater than what would be expected by chance; (3) to estimate the accuracy of the prediction; (4) to describe the relative contributions of the independent variables to the resulting theory and practice by eliminating independent variables which do not add substantially to prediction accuracy of the dependent variable (Nie et al., 1975; Williams, 1979). Of these five objectives we were most concerned with objectives (4) and (5). We chose multiple linear regression because it is most helpful for exploratory analysis (SAS Institute Inc., 1982).

Those independent variables that displayed some relationship to the dependent variable (i.e. drop out or persistence in the NZTCI management courses) in the previous bivariate analysis ** were utilized in multiple regression analyses, in order to describe the relative contributions of the independent variables to the prediction of the dependent variable and to simplify results. Independent variables were grouped as before, into the four classifications used in the literature review (demographic, social interaction, psychological, and institutional) and each used to predict drop out or persistence. In the social interaction grouping, variables which did not display statistical significance in bivariate relationship to the dependent variable were included. Normally they would have been excluded, to meet the requirements of multiple regression analysis, but were included because few variables had been measured in this grouping and only one had displayed any relationship. In addition, their inclusion could offer clues as to the route future research might take in exploring the relationship of drop out with social interactions.

** Bivariate means two variables considered simultaneously. Once the best models were obtained for each of the four groupings, a further multiple linear regression was calculated with predictor independent variables within each classification. It was hoped that this final model would permit us to evaluate in a rough sense which of the four classifications had the best potential as an area for development in further research.

Once the best models were obtained for each of the four groupings, a further multiple linear regression was calculated with the best.

We used the Statistical Analysis System (SAS) computer software system for data analysis. For this step, we employed the SAS regression procedure known as STEPWISE "Maximum R^2 Improvement" (MAXR). This approach tries to find the best one-variable, two-variable, three-variable, etc. model in explaining the dependent variable variance. SAS permitted us to specify the level of statistical significance for an independent variable's entry into the model and for staying in the model. We chose for both entry and survival, roughly the same level we had used earlier when evaluating bivariate relationships between independent and dependent variables.

There is a limitation on the output of this computer procedure. That is, if any respondent had missing values for any of the variables involved in the calculation of a given model, the respondent was omitted from the calculation. Thus, the size of the respondent total used in the regression procedures was lower than the total study N, particularly when variables involving sizable levels of missing data were considered. In the initial four multiple linear regressions (one for each classification) we stayed well below the recommended maximum of 20 independent variables for a single model statement (SAS Institute Inc., 1982). The demographic model, for example, had 11 independent variables. The social interaction model had seven, the psychological had eight and the institutional had 10. Economy was achieved by creating scales by summing semantic differential items into single scores for respondent evaluations of NZTCI assignments (seven items), NZTCI correspond-ence tuition (eight items) and job while studying (five items).

Results of the four multiple linear regression calculations run for each of the predictor sets of independent variables and drop out/persistence was calculated and the best five variable model for each predictor set was selected. The details are as follows:

1. *Demographic variables.* In the demographic variable set, the best five variable model predicted 2.3 percent of the variance in drop out/persistence with the probability that about three in a hundred scores were due to chance (p=.0341). The best single variable was respondents' job classification as unskilled, sales personnel, or supervisory role (F=3.83, p=.051). This was followed

by : secondary school commercial, secretarial or trade qualification (F=3.46, p=.0633); ethnicity (F=2.32, p=.1285); change of job and employer during studies (F=2.00, p=.1582); and church, community or political commitments (F=1.75, p=.1859).

2. *Social Interaction variables.* The best five variable model in this set predicted a scant one percent of variance in drop out/persistence with a p-value of .2231. The best single variable was overseas travel during the course of respondent's study (F=3.28, p=.0708)

3. *Psychological variables.* The best five variable model predicted 6.1 percent of variance in drop out/persistence; this was significant at the .0001 level of probability. The best single predictor was the match between course and expectations at time of enrolment (F=8.53, p=.0037). This was followed by : positive valuation of job during study period (F=5.41, p=.0204); belief that qualification provided better career prospects (F=5.11, p=.0242); hours spent, studying and responding to each assignment (F=4.95, p=.0265); and expectations of course when first enrolled (F=2.21, p=.1378).

4. *Institutional variables.* The best five variable model predicted 10 percent of variance in drop out/persistence and consequently was the best predictor set, significant at the .0001 level. The best single predictor was the correspondence tuition evaluation scale (F=19.57, p=.0001). This was followed by: subject in which assignments took the most time (F=5.21, p=.0232); belief that seminars would assist study (F=3.83, p=.0531); the NZTCI assignment evaluation scale (F=3.04, p=.0821); and the belief that audio-taped material should supplement written assignments (F=1.56, p=.2124).

Thus of the four predictor sets, institutional variables predicted the most variance in drop out followed by psychological, demographic and social interaction. In other words, the most likely explanation of why students drop out can be found in the way NZTCI as an institution performs but psychological, demographic, and social interaction variables also make a contribution although to a lesser degree.

5. *Best Predictor Independent Variables.* Sixteen variables (the five best variables from each of the institutional, psychological, and demographic predictor sets, plus the single significant variable

from the social interaction predictor set) were utilized in a final multiple linear regression model. These 16 variables predicted 18.7 percent of the variance in drop out/persistence (F=2.85, p=.0003) with the single best predictor being an evaluation scale of correspondence tuition (semantic differential bipolar adjective ratings). We chose the best seven variable model to display in Table 10 on the grounds that all seven variables in the model were statistically significant at near the .14 level or lower. In this case it was appropriate to take a lesser level of significance than would be the case in comparing subgroup performances.

Table 10:
Stepwise Multiple Linear Regression Model, Using Maximum R^2 Improvement with Best Predictors from Four Predictor Sets (Demographic, Social Interaction, Psychological and Institutional)

Variable	F	Prob F
Correspondence Tuition Evaluation Scale (positive=high score)	18.16	.0001
Church, community, political organisation commitment (1=yes)	10.78	.0012
Subject in which assignments took most time (1=vague answer)	5.06	.0255
Seminar would assist with NZIM studies (1=yes)	4.12	.0437
NZIM qualification gives me better career prospects (more important= higher score)	3.26	.0724
Had overseas trip (1=yes)	2.66	.1045
Supplement written assignments with audio taped material (1=yes)	2.11	.1482

	R^2	F	df	Prob F
Best seven variable model	.162	5.72	7,207	.0001

The best seven predictors contributed 16.2 percent of variance in drop out/persistence with the best single predictor being the correspondence tuition evaluation scale (F=18.16, p=.0001). The remaining six predictor variables, in order of contribution: church, community or political commitments (F=10.78, p=.0012), subject in which assignments took most time (F=5.06, p=.0255), belief that seminars would assist studies (F=4.17, p=.0437), belief that qualifications would assist career prospects (F=3.26, p=.0724), overseas travel (F=2.66, p=.1045), and desire for audio-tape supplements (F=2.1, p=.1482). Four of these seven predictor variables came from the institutional predictor set and the remaining three came from the other predictor sets (one each).

MAIN FINDINGS OF THE STUDY

I. Characteristics of NZIM Students

The 724 NZTCI management course respondents in this survey are not typical of the New Zealand population. Over three-quarters were male, their average age placed them in early adulthood (more than 90 percent were aged between 18 and 44 years) and almost all were Pakeha/Caucasian. Nearly two-thirds were married and more than one-fifth were single. The majority lived in households with three or fewer persons. More than half had dependents.

Their secondary education levels were high for the most part, with more than one-fifth holding University Entrance. Nearly two-thirds held some type of post-secondary qualification, although over 90 percent had been away from formal schooling for at least one or two years, and one in five had an education gap of more than 10 years. More than three-quarters were in supervisory, administrative or skilled occupations. More than three in five supervised other employees on a daily basis and tended to work a moderate number of hours per week. More than a quarter regularly worked overtime for a few hours per week. Fewer than one in 10 held secondary employment, but nearly three-quarters had beyond-home commitments, spending an average of more than nine hours per week on various activities such as sports, church, community service, and hobbies.

Tables 3.1 to 3.3 show some of the differences between the characteristics of NZIM students and the general New Zealand population. For example, 77 per cent of the NZIM sample were males, even though they comprise only 49.7 per cent of the entire New Zealand population (as at December 1985). Obviously the NZIM sample was over-represented in some aspects (e.g., by married males) and under-represented in some aspects (e.g., by ethnicity), when compared with the demographic characteristics of the entire New Zealand population.

II. Reasons for Taking NZIM Course

Why did the respondents enrol in the NZTCI management course? The vast majority (more than four-fifths) said they enrolled to benefit their careers in the long run. Fewer enrolled because they would receive immediate remunerative or workplace benefits. A goodly number said they enrolled to experience personal or other satisfactions from the courses. Respondents' major expectations of the NZTCI management courses were academic, in that they expected to gain knowledge and technical competence. But their expectations were also pragmatic in that they expected to use academic knowledge and technical competence in their work to gain advancement.

Nearly two-thirds of the respondents aged 30 years or more, lived within 16 kilometres of a technical institute, polytechnic or community college which offered alternative instruction towards NZIM qualification. They saw NZTCI management courses as flexible, permitting them to work at their own time and pace as a way to reduce travel problems. A third of respondents under 30 years of age were exempted from the requirement that they attend the community polytechnic within 16 kilometres of their residence because of shift work or unsuitable hours. Another fifth gave the demands of work-related travel as their reason for exemption.

III. Methods of Study

In their appraisal of NZTCI basic study services, more than 90 per cent of respondents said the initial enrolment information was satisfactory and that the mail delivery service was adequate. More than four in five respondents judged the mailed assignment turnaround time as sufficient.

When studying, three-fifths of respondents spent less than eight hours reviewing and responding to each assignment. Background reading or extra study was less common, with more than three in five respondents spending fewer than three hours in these activities whilst eighteen percent spent no extra time. Slightly less than one third spent under three hours in answering test papers and preparing scripts. More than a third spent from three to four hours in this task.

The four course assignments that were judged to take the least time were Supervision Certificate core modules: Introduction to Supervision, Labour Relations, Staff Development and General Administration (each nominated by between nine and 15 in 100 respondents). Supervision Certificate elective modules were rarely nominated as taking the least time. Another Supervision Certificate core module (Elements of Business Law) was most frequently nominated for taking the most time (by more than six in 50 respondents), followed by Introductory Accounting (by one in 10 respondents). Industrial Administration, Basic Statistics, Local

Authority Administration and Management Services were rarely nominated as taking the most time.

IV. Satisfaction with Tuition

Overall, the performance of NZTCI management tutors was evaluated positively, with about four in five respondents judging tutor comments on scripts as helpful. Only a tiny percentage of respondents (about one in 50) said tutor comments generally were not helpful.

Some subjects were singled out for critical comment, however, with Introduction to Supervision and Elementary Business Law named by more than one in 10 respondents. The majority of critical comments mentioned tutor-related aspects such as poor standard of comments, discouraging comments and illegible writing. But criticisms of set assignments were very rare.

NZTCI management tuition generally was judged positively by respondents, who saw it more interesting than boring, more rewarding than frustrating, more friendly than unfriendly, more useful than useless, and more organized than disorganized. Nevertheless, they also saw NZTCI correspondence as more tiring than untiring, and felt it was midway between easy-going and strict, and between easy and difficult.

NZTCI management assignments also were evaluated positively. Respondents believed assignments were more readable than unreadable, more helpful than unhelpful, more specific than general, more concise than wordy, long rather than short, more up-to-date than out-of-date, more interesting than uninteresting, more relevant than irrelevant and more organized than disorganized. NZTCI assignments were also judged halfway between technical and non-technical.

V. Attitudes to Alternative Educational Media

A majority responded positively to the suggestion that seminars, relevant radio and television programmes, and limited tutor telephoning could supplement NZTCI management study. Seminars were most attractive, being endorsed by more than four of five respondents, and in follow-up questions, were judged worth considering although it was recognized that they would be time-consuming in terms of organization.

More than one in two respondents were positive about the use of radio, TV and tutor telephoning. Less support (one third) was voiced for supplementary audio-taped material and telephoned tutor comments on work rather than written comments (one in five). Many respondents felt audio tapes could be used for supplementary purposes such as information, background, explanation and personal contact.

Radio and TV were believed to be supplementary channels for teaching and learning by more than a quarter of the respondents who felt these would be beneficial study aids. A similar proportion advocated radio and TV use to present case studies, interviews, practical examples and opinions from persons other than their tutors.

VI. Assessments of NZIM Course

A majority of respondents gave the NZTCI management courses good marks. Two in five respondents said the courses were as good as they had expected, while seven in 50 said they were better than expected.

On the negative side, slightly over 17 out of 100 respondents said the courses were not as good or worthwhile as expected, or not of much use. Nearly 19 in 100 felt the courses were too difficult, or said they couldn't cope, or said their course required more time and work than expected, or that it was worse than expected. The balance of respondents were noncommittal.

Nearly one-quarter of 295 respondents, who made general comments about the courses, said course materials needed updating, checking or improvement.

VII. Effect of Employment and Leisure Activities on Study

Respondents displayed mixed enthusiasm about their jobs while studying for NZIM qualifications at NZTCI. Their jobs were judged more negatively than positively, in respect of their difficult, strict, hurried, and tiring qualities. However, respondents were more positive than negative when assessing their jobs in terms of interest, reward, pleasantness, organization, friendliness and usefulness.

More than two in five had experienced changes within their jobs during the study period, most of which were positive. More than a quarter had changed jobs and/or employers during their NZIM study period, again mostly with positive results.

Respondents reported both anticipated and unanticipated life changes during the course of their NZTCI studies. Almost a third had an overseas trip, for example. Thirty-one of these respondents said their trips had some influence on their decision to withdraw from studies. Almost two-thirds were away from New Zealand for less than six months and more than half reported that they were unaware that they could have arranged for continuation of NZTCI studies during their absence.

Other major categories of life changes included having children, marriage or cohabitation, serious illness and receiving permanent dependents into their households (the latter influencing a wide range of respondents). Major study distractions affecting eight percent of respondents included the launching of new part-time ventures, and significant changes in family or financial statuses.

VIII. Characteristics of the 'Dropout'

More than one-third of the respondents had dropped out of NZTCI management courses. Among the reasons cited, by at least half of the dropouts, was the "lack of time". Only 16.5 percent of the dropouts said "lack of time" did not apply to them. For the remaining dropouts, the average evaluation (1.63) was that "lack of time" ranged between "very" and "quite" important in their decision to leave their NZTCI management studies.

The next strongest reason, that they took up studies for interest sake only, achieved an average score of 2.46 on a four-point scale (where four stood for "of no importance"). Similar average scores were recorded for: lack of adequate tutor assistance; general dissatisfaction with correspondence study; or course or subjects too difficult.

Difficulty of reading materials did not rate as an important reason for drop out. However, for a minority of dropouts, the following reasons were quite important: voluntarily changed to day community polytechnics for classroom instruction; or changed jobs. Personal problems, illness and overseas travel averaged between "quite" and "of little" importance for less than a majority of dropouts.

The remaining reasons, which averaged between "of little" or "no importance" for a majority of respondents, were unavailability of study materials; compulsory change from NZTCI course to a community polytechnic programme; course/subject material considered irrelevant or outdated; and administrative problems such as mailing of assignments. More personalized tuition was desired with more institutional assistance and seminars considered a major means of helping dropouts continue their studies. A variety of other forms of assistance were also mentioned by small numbers of dropouts.

About one in 10 respondents had completed one of the four Supervision Certificate modules before dropping out: Introduction to Supervision, Labour Relations, General Administration or Staff Development. Altogether, 161 courses were reported completed by the 248 dropouts; an average of fewer than one course per person. Seven out of 10 of these courses had been completed in the two year period prior to the study. More than three in 25 dropouts were in the Introduction to Supervision course when they dropped out. Students withdrew from the remaining courses before completing the appropriate programme, fewer than nine percent in each case.

The large majority of dropouts (about 79 in 100) had discontinued their studies in the year preceding the survey and about nine in 100 had dropped out during the year of the survey. An open-ended question, which solicited reasons why respondents had dropped out of specific courses, demonstrated once again that lack of time was an important consideration for dropouts. Sixty-six of 174 reasons offered had to do with lack of time (nearly 38%).

More than a quarter of the dropouts indicated that unhappiness with their employment had affected their NZIM studies. However, because of the wording of the question we are not quite sure whether such unhappiness actually contributed to eventual drop out, although that would be a valid interpretation, considering the context in which the question was placed. About three in 10 dropouts reported that they had previously withdrawn from a course of study other than NZIM, suggesting that dropout behaviour is a habitual life pattern for some students. However, many of the respondents we have called "dropouts" might better be termed "stopouts", if the terminology of Cope and Hannah is used (1975). They used "stopout" to refer to a student who temporarily had dropped out, but who intended to resume studies at some later point. More than three in five of the students who had left their NZIM studies said they intended to restart their NZIM studies at some time in the future.

1. *Demographic factors.* There were numerous demographic predictors of drop out. Gender was not a factor in drop out although

the difference approached significance. Ethnic background may be related to drop out, (however such ethnic groups were under-represented in the NZIM sample) with Maori and Pacific Islanders appearing to be more inclined to discontinue their studies. Unskilled workers, sales personnel and supervisory workers had higher drop out rates than administrative, skilled or other occupational workers. Those who worked shift work or had secondary jobs were more likely to leave their studies than those who did not. Those who changed jobs and employers during the course of their studies had a higher drop out rate than those who did not.

Respondents who left secondary education with a qualification in commercial, secretarial or trade areas were more likely to leave their studies. The gap since the last formal educative experience was a factor, with those with larger gaps being more prone to leave their studies.

The larger the household in which the student lived, the greater the probability she or he would leave their studies. Finally, those who had church, community or political commitments that intruded on their studies were more likely to drop out than those who had other recreational commitments, or none at all.

Based upon this study, we submit that lack of time, interference with one's study periods, lack of academic study skills, and lack of self-confidence appear to have played important roles in determining drop out rate from the NZIM courses at NZTCI.

2. *Social Interaction Factors.* We found only one social interaction variable that was a correlate with drop out. This was due, in part, to our not highlighting any such variables. Even the one variable which was significant was an indirect measure, namely whether or not the student made an overseas trip during the course of her or his studies. Those who went overseas, and no doubt were forced to cope with a different culture and range of social interactions, were less likely to drop out than those who stayed in New Zealand. This was an unanticipated finding and may have more to do with individual motivation than with any direct benefits of travel.

3. *Psychological Factors.* There were a number of psychological variables which were related to drop out rates. For example, if a student perceived his or her job to be unpleasant, frustrating, disorganized, tiring or hurried, drop out rates were greater than if

the respondent perceived his or her job to be pleasant, rewarding, organized, not tiring or unhurried. If the respondent felt the NZIM qualification would promote career prospects, or would benefit a future career, there was a lower drop out rate.

Those respondents who had vague expectations of the NZTCI management courses when they enrolled were more likely to leave their studies than those who expressed goals and values, such as expecting to work hard, planning to commit lots of time to studies, or thinking that the course would be organized and structured. Where there was a fit between future expectations of a course when enrolling, and positive actual experience of the course, drop out rates were lower.

Among students who were motivated to spend large amounts of time in studying and responding to NZTCI assignments, to utilise background reading and extra study in order to answer assignment questions or test papers, there was a lower drop out rate. These findings, involving psychologically-orientated variables, suggest that having goals and values and being motivated were important to successful completion, or persistence, in NZTCI management courses.

4. *Institutional Factors.* Institutional variables also appeared to be related to student persistence in NZTCI management studies. By "institutional variables", we refer to people working for NZTCI (administrators, tutors, staff); or people providing services which are essential features of the response link between NZTCI and its students (such as Post Office workers); or physical materials (such as assignments, records etc.); or correspondence tuition, which involves communication flow between individuals regarding the curriculum and other study related concerns.

When the mailed assignment turnaround time was perceived by respondents as being insufficient for their needs, the drop out rate was higher. Among respondents who were not satisfied, the longer the turnaround time, the higher the drop out rate.

Turning to NZTCI assignment evaluations, seven perceptual evaluations were related to persistence: relevancy, organization, specificity, readability, interest and conciseness. Students persisting in their studies were more likely to use the following adjectives in evaluating NZTCI correspondence tuition: useful, friendly, pleasant, organized, interesting, not tiring, rewarding and unhurried. When respondents were vague about the amount of time they had allocated to certain subjects, drop out rates increased.

There was relatively little criticism of NZTCI management tutors in terms of specific types of modules or subjects (Supervision Certificate core or elective modules, or Management Diploma subjects). A general measure of criticism concerning tutor comments on assignments (separating those with at least one criticism from those with no criticisms) showed that critical students had higher drop out rates. Drop out rates tended to vary among those who expressed criticisms, but were greater, if the criticism had to do with expectations of too high a standard, or of making too great a demand.

Finally, we found that respondents who had left their studies were more likely to endorse the idea of incorporating or substituting supplementary educational technology into the NZTCI management courses. Drop out rates were greater for students who agreed, than for those who disagreed, with the following ideas: written assignments should be supplemented with audio taped material; telephone comments on work would be preferable to written comments; a limited amount of telephone tutoring during the NZTCI study would be preferable to none; and attending a seminar would assist with NZIM studies.

5. *Most Significant Factors in Drop Out.* Stepwise multiple linear regression was used to describe the relative contributions of the independent variables to the prediction of the dependent variable, drop out/persistence. It also provided a simplified theory, by eliminating those independent variables which contributed little to the explanation of variance in drop out/persistence.

Results indicated that the institutional predictor set contributed most to the variance, both in terms of the number of variables and the importance of these variables, than did the other predictor sets. Of most importance as a single contributing variable was the scale based on eight adjective pairs used to evaluate correspondence tuition. That is, respondents summed up score ratings of correspondence tuition in terms of: organization, usefulness, friendliness, pleasantness, interest, hurriedness, reward and degree to which correspondence tuition was tiring. This appeared to do the best job of all variables examined in explaining variance in drop out/persistence. The more positive these assessments, the lower the drop out rate. Lack of time, emotional responses to NZTCI cues, course structure and practicality appear to play an important role in this measure.

The next most important predictor was the respondent's degree of commitment to church, community and political organizations. Those with commitments to these organizations had higher drop out rates than those with other recreational commitments or no commitments at all. Perhaps these commitments were so demanding as to interfere with serious studies. If respondents gave a vague answer to the question as to which subject assignments took the most time, their drop out rate was higher. This indicates the confusion, or lack of involvement, or lower levels of effort, may be likely contributing causes to some drop out decisions.

Respondents' agreement, or disagreement, with the idea that seminars would assist with NZIM studies and their agreement, or disagreement, with using audiotaped material as a supplement to written assignments were among the best predictors of drop out/persistence. As noted earlier, dropouts were more likely to endorse these uses of educational technology. Thus, these variables cannot be seen so much as a cause of drop out as possible ways of forestalling drop out. This suggests that dependency on a single medium of delivering information — written assignments — may contribute to drop out rate. This may be because they are demanding of time, difficult to read and comprehend, or because they have other limitations associated with print media.

The importance of psychological goals and values was highlighted by the appearance of the deferred gratification career advancement variable among the best predictors of drop out. Those who attach strong importance to this goal or value, were less likely to drop out.

Finally, having as overseas trip during the study period was associated with persistence. This does not mean that we should counsel students to take such trips when they are in NZTCI management courses, as much as it illustrates such students determination to overcome difficulties which could jeopardize progress. We would like to know more about the type of individuals who made such trips. Perhaps this variable masks another underlying variable which would provide more insight into the reason why it appears to be a good predictor of drop out/persistence. The possible interpretation we have placed on it, that overseas trips increase social interaction as the individual enters a new culture, should be explored further in a more competitive explanatory context.

COMMENTS ON THE STUDY

There are limitations associated with every research study and this study is no exception. It shares some common limitations which have been noted in other research studies concerning attrition and persistence (Pantages and Creedon, 1978; Reed, 1981; Taylor et al., 1986). Pantages and Creedon, for example, examined approximately 135 USA research studies of attrition in higher education and pointed out several major limitations associated with study methods which were used by investigators.

First, many studies concentrated on single variables rather than recognizing that there are multiple factors operating concurrently to produce attrition. Reed (1986) complained that simplistic data analyses (often only frequency distributions) were used to make complex conclusions. We have attempted to avoid these limitations in our study.

However, a limitation of working with multiple variable models, such as multiple linear regression, is that if data for any variable in the model are missing for a respondent, the respondent is dropped from the entire analysis. Thus, if there are missing data in the data set, the size of the respondent pool being utilized can be reduced dramatically. Our data set was based on a questionnaire which was 18 pages long and which asked over 160 questions, some of which were quite "picky" and specialized. Some respondents, perhaps suffering from fatigue, carelessness or inattention, did not complete all questions. Future studies should perhaps be more careful in measurement, limiting questions only to those of interest to a majority of respondents, or of critical importance to the theoretical and applied needs of the researchers. Greater effort needs to be given to the task of ensuring that the maximum possible levels of question completion be obtained from each respondent, even if this entails laborious followups.

Secondly, the studies were largely 'ex post facto' in design. That is, they asked dropouts why they had withdrawn after they had done so. Longitudinal studies endorsed by Pantages and Creedon would be more productive. However such designs are costly, time-consuming and subject to serious mortality in the sample as time increases.

A third limitation is that many studies are deficient in conceptual definition, such as failing to define what is meant by "drop out". The distinction between drop out (permanent) and stop out (temporary), for example, is usually ignored. Our study permitted students to decide for themselves whether they were dropouts, or whether they intended to take up their studies at NZTCI again, and we found that a large proportion (65.3%) indicated that they did plan to resume. This reinforces the observation that a dropout/stopout distinction is worthwhile. This finding permits us to observe, as did Pantages and Creedon, that there are enormous differences in attrition rates between individual institutions studied, and that part of this differential may be due to varying conceptual definitions. At any rate, the proportions of drop out reported in the literature are likely to be inflated.

A fourth limitation is that reasons provided by students and tutors as to why students leave their studies are often at variance with each other. This may be due to misinformation or misunderstanding, or may be rationalization for a decision to drop out, or the desire to give socially palatable responses. The responses provided in this study came solely from students so some caution is advised. Steps were taken to reduce such possible misdirections as socially acceptable answers through guarantees of confidentiality and assurances that student responses were not going directly to NZTCI. However the possibility that some students may have given us invalid and unreliable information cannot be ruled out. Obviously, further studies are necessary to corroborate information through use of multiple sources of data.

A fifth limitation of attrition studies (which we were not immune to), criticises the procedure whereby only drop out students are asked questions about problems associated with their studies and then attribute drop out to those reasons. As Hackman and Dysinger (1970) have noted, "almost all of the problems reported ... are shared by large numbers of students who do not withdraw". Stated another way, designs which lack a control group are inherently weaker than those which are in a position to compare one group with another (in this case, dropouts with persisters).

A sixth limitation has to do with the more general survey methods often employed in gathering information, especially those which rely heavily on forced-choice responses or generalization. Pantages and Creedon noted that "Questionnaires ... cannot tap the complex reasons and motivations involved in attrition and can only identify factors that need further research" (p. 85). We endorse their statement and add in self-justification that survey studies often are the only sensible way to proceed when the phenomenon to be studied has not been well researched previously, or when the work is exploratory. Clearly, more qualitative follow up research ought to be done in addition to the largely quantitative work which we have undertaken here.

A seventh limitation of our study can be traced to the enormous academic literature which has accumulated. In the period since our mail questionnaire was finalized we became acquainted with the interesting work being done in areas which we did not measure, such as the search for personality characteristics of dropouts. Also, we might have given more consideration to social interaction predictors. Themes covered in the literature review, but not addressed by this study, deserve further testing in the context of New Zealand distance education and we recommend that measurement of some of these neglected variables be considered in future research efforts.

If future studies could be designed to test our study findings this would overcome the eighth limitation facing us, namely the generalizability of results. For example, if we were to contact the same respondents again, we might find out how many of those who said they did intend to continue their studies for NZIM at NZTCI in the future had in fact done so and to see if the original answers to the questions gave us a better-than-expected-due-to-chance distribution of observers in the predicted direction.

Finally, there is the question of the study's validity (Moser and Kalton, 1971). In particular one type of validity which we considered was discriminant validity. This type of validity depends upon the existence of related measures of concepts, with comparisons between the researchers' measurement results and the results of measurements of the same, or similar, concepts using different measures developed by other researchers. However, we would not expect identical results, or there would be no point in developing and using one's own measures. The measures should discriminate. In this study, one particular area of comparison between our measurement and that of others in similar (but not identical) situations and circumstances examines the relationship between marital status and drop out rate among New Zealand tertiary students (Boshier, 1969; Horton, 1976). An examination of the illustrative relationship showed differences in findings. However, given the span of years separating the studies, the different educative systems and nature of learning, such differences could be rationalized.

In summary, we are prepared to argue that we have had reasonable achievement in establishing not only face validity, but also concurrent and construct validity in our measurement. Evidence concerning predictive and discriminant validity would be best established by conducting a follow up research study, on the one hand with the same respondents, and on the other with any group of similar respondents; but using different measures.

On the question of external validity, that is, the extent to which researchers are justified in generalizing from a particular set of findings among a specific sample or population, to a wider set of circumstances and population, we are cautious. Our findings are in the same general direction as many of the findings established by other researchers who have examined similar research questions in other contexts. Yet, the research of Taylor et al., (1986) urges caution, having shown that a key hypothesis concerning script turnaround effects does not have universal application in different systems in different cultures. Thus, we wish to err on the side of conservatism, and urge the reader to be careful in generalizing from our study to other situations, systems, populations and cultures.

RECOMMENDATIONS

Many highly specific recommendations could be based on the findings of our study. Instead we have chosen to present general recommendations, as we believe that NZTCI itself is best equipped to generate specific responses from our general recommendations.

1. *Overview*

1.1 First, we *commend* NZTCI for its progressive perspective in co-sponsoring this research. It is a sign of a healthy institution when it questions and examines its performance to find flaws and then to work to improve its procedures or policies. We hope that the results of this study will be helpful enough to foster continued positive attitudes towards on-going research of this nature.

1.2 Periodic assessments and formalized feedback from students, not only in management but also other curriculum areas, will permit various NZTCI departments to evolve and adapt with changing times and clientele. An understanding of learners' backgrounds can pay off in many ways, such as in writing new courses, revising existing courses, and in allowing tutors to keep in touch with the varied needs of their clients. This study has established for example, that most management students are male, Pakeha/ Caucasian, and well-qualified in terms of educational background and skills. They tend to see management courses and NZIM qualifications in terms of the future believing that their careers will be fostered by application to study. Thus, they seem willing to defer gratifications. A tutor armed with this knowledge could reply more aptly and skilfully when commenting on learners' scripts.

1.3 Efficient information transmission is essential for effective learning. Research can demonstrate, for example, whether or not learners are satisfied with the enrolment information they receive, how well the mail delivery system is working and how satisfied learners are with the turnaround time for their scripts. This study has given NZTCI management courses a fairly clean bill of health in this area and future studies of similar nature will permit NZTCI to sustain, or even improve, the existing system.

2. *Student Support*

2.1 We *recommend* that learners should be given a clear idea of expectations prior to beginning their studies. Student pacing and motivation is essential to their success and they need to be given realistic ideas of the time commitment necessary and the frequency with which they will need to complete assignment scripts. Based on our research study, management students could be given a profile of the type of student who has persisted and succeeded in the courses, and a profile of those who dropped out. They could learn from such profiles, they could learn that they will have more success if they devote longer hours to their studies, background reading and test question writing, that long range goal setting has benefits, that they should avoid working at a second job if possible, and that gender or age per se are not barriers to persistence and success in management studies. For example the following personal account from a 41-year-old female NZIM could provide inspiration — an excellent role model — for future students:

> "During the illness of the County Clerk, I found I had to permanently change my workload and re-delegate work. When the County Clerk died of cancer, I took over as Acting County Clerk. At the same time, I cared for my father quite often shortly before his death. I had a daughter get married one-and-a-half hours after my father died. These were the

> main distractions which brought me close to a breakdown. It was heavy going. NZTCI has treated me with patience. I am now on the fifth year of a two-year course. I have made a personal vow to complete this year. Love the work, find it frustrating, time consuming. Almost a love/hate relationship. I get a lot of support from my family and employer. I can't understand why people withdraw. My grief and hard work have made it more important to me and my father was proud of my efforts. Can I say more?"

The motivation and commitment contained in this personal testimony is a far cry from the confusion and ambivalence of many students, such as the following. We believe that this student should have received some type of guidance and help prior to enrolling in the management course:

> "I dropped out mainly because of the distraction of knowing what type of job I wanted. Found it hard to stay home during the week to study for something I didn't know for sure I wanted." (24-year-old male sales manager who decided finally to switch to a refrigeration apprenticeship for practical reasons).

2.2 The findings of our survey show that certain types of student may be targeted as dropout-prone at the outset. We *recommend* that special assistance should be offered to them, with or without their knowledge (as deemed best), until such time as they demonstrate that they no longer need such attention. Alternatively, some students may be persuaded not to start studies until such time as they have had a chance to overcome problems such as study skill deficiencies. These students could be advised that the odds are not in their favour, but that NZTCI is willing to provide whatever assistance can be provided if they decide to take up studies. They should be counselled to start off with a light course-load. This is a potentially controversial recommendation and may have economic, political and social repercussions if adopted. Yet, the plight of many distance education students is bona fide. Can the following dropout student be helped? This 23-year-old single male, working as a dairy technology trainee/cadet illustrates the hectic lifestyle of many distance education students and illustrates the common complaint of "not enough time to do my studies":

> "I am a very busy person. A typical day can begin with me staring work at 0700 hours at the factory. I would finish at 3.30

> p.m. and proceed home. I usually like a couple of hours break before beginning study for the evening, but most often I don't get it. I have an interest in the share market and invest quite a bit. I plot the share prices on graphs and this takes a little time each day (usually about an hour). I then have to answer some letters or bills for the day. By that time, I have to have dinner and that sort of thing. I then begin to study on my NZTCI work after dinner, say 7 p.m. I would work until about 11 p.m. or until I drop, whichever is the sooner. Of course, this time of year (March) is tax time and working out one's expenses takes up a considerable amount of time. I also have a report to complete before returning to Massey in May. This report would take up to two weeks to complete, sometimes longer, thus interfering with my NZTCI studies. Despite all this, my marks are good, averaging an A- in all my subjects. I have not been able to put out one assignment per week, although I can do it, which really takes a hell of a lot of effort. I really want to be able to continue my studies. I am really scared that I might get discharged from the course because of unsatisfactory output of work to be marked. My marks, as I said, are first class, and so therefore, I do not want to be dismissed from the course. I would eventually desire to attain my NZIM Diploma in Management."

2.3 We *recommend* that every opportunity be provided for tutors and students to make contact. Students appreciate the chance to make personal contact with their tutors, as in this comment from a 33-year-old male, married with four children, working as an industrial engineer:

> "As mentioned in the questionnaire, some personal contact is appreciated to overcome the lack of understanding of some parts of the text. Tutors and students could make contact a minimum of twice during each subject. They could check the understanding of topics to data, the tutor could also ask a set list of questions of the student. This would ensure no misunderstanding and advice could be given where more study was necessary."

Or, as in this plea from a 24-year-old male sales manager who withdrew from studies:

> "For myself, I found the course to be most valuable. The problem I found was not having anyone to turn to when faced with a problem. In school, you could ask the teacher and get a

> reply instantly. The fact that we have to send our request away is not your worry, but I found I lost interest. Maybe if we could ring our tutor, this would solve the problem. However, I realize that this can be very complicating."

3. *Tutor Support*

3.1 We *recommend* that insofar as possible, the same tutor work with a given student throughout the administration of a module or subject. Respondents in this study were critical of constant tutor changes, which they felt disrupted continuity and led to different standards being applied, or conflicting points of view being expressed, which in general was damaging to good tutor-student rapport. Regarding the differences between tutors, a 27-year-old male prisoner said:

> "Tutors should be uniform in their instructions regarding length of answers. It's frustrating when they're not. I was forever being told to increase or decrease the length of my answers. One assignment, I'd be told to answer more fully, the next, to cut back."

3.2 We *recommend* that tutors also should continue to work on reducing turnaround time to a minimum in order to diminish drop out and that course authors, editors and illustrators should continue to hold high standards in the revision, writing and production of assignments. Students are influenced particularly by such assignment qualities as relevance, organization, specificity, readability, helpfulness, interest, conciseness and brevity.

3.3 We *recommend* that one concrete means of maintaining high quality during one step of the process — tutor communications to students — could be accomplished by conducting frequent, random and non-punitive checks of tutor comments on scripts being returned to students. Such things as legibility of handwriting, degree of encouragement, substance of comment and level of bias in point-of-view should be scrutinized. In an appropriate non-threatening environment, tutors who do not achieve high standards, should receive in-service training which corrects deficiencies and which fosters positive practices. We note that about one out of five management students were critical of their tutors on these qualities and that student criticism of tutors was a factor in drop out. For example, a 44-year-old male prisoner made the following criticisms of his tutor's comments:

> "I think some tutors are a little bit harsh in their comments. A student may spend many hours in research and is in fact on the wrong track, and answers the question relating to something else. The tutor's reply sometimes give the student a feeling that he is wasting the tutor's time and his own. His final decision is to give up in disgust. A tutor's comments in this case should be to encourage the student; e.g., 'Please do not be too upset, as it happens to many. Basically ...'"

3.4 Correspondence tuition, in turn, plays a part in reducing student drop out if it is perceived as useful, friendly, pleasant, organized, interesting, not tiring, rewarding and unhurried. Our data show that NZTCI is doing a creditable job concerning these dimensions and we *recommend* that NZTCI staff and tutors be reminded of the importance of their work, congratulated for their successes to date, and challenged to do even better in the future.

4. *Institutional Support*

4.1 We *recommend* that overall curriculum review ought to be constant as existing assignments are revised and new assignments are written. These reviews ought to look for discrepancies, excessive overlap and redundancy, with an eye toward eliminating them and making assignments consistent over the range of modules and subjects. Students are quick to spot deficiencies in their assignments and many of them took time in filling out their mail questionnaires to tell us about such inconsistencies. For example:

> "A lot of the assignments in NZIM Supervision Certificate are always repeating themselves. It seems that you are always reading the same point, and answering the same question within different assignments." (20-year-old male wages and sales clerk).

The credibility and liveliness of NZTCI, as a teaching-learning institution, seems to be at stake here. Witness this comment from a 47-year-old male laboratory officer in a hospital:

> "So far as NZTCI is concerned, I was very satisfied with all aspects of the NZIM courses. Tutors were all friendly and very encouraging. The material supplied was clear and as readable

> as could be expected. But 'General Economics' (1980) was being taught with seriously out-of-date material. ...my withdrawal had nothing to do with failing on the part of NZTCI, but was due solely to a belief that NZIM had no relevance to my employment.... the theories of personal management and human behaviour concerned in 'Organization and Management' could not work in my situation — nor, I suspect, anywhere else! NZIM qualifications may have a valid place in industry and commerce, but in government service, the attitudes and policies of upper management levels make it impossible to apply the theories of management in the workplace."

4.2 The Supervision Certificate core modules are of special concern when considering drop out. Many of our respondents withdrew from these courses. For example, nearly 12.4 percent withdrew from Introduction to Supervision. Also, many withdrew from studies after completing these courses. Was drop out due to the courses themselves? Our evidence does not point a finger directly at any one course, but we feel that initial courses are very important to students who are getting their feet wet in the subject or evaluating whether or not they wish to continue their studies. We *recommend* that basic courses be of the highest possible professional level in terms of content, interest and challenge, and that tutors for those courses recognize their unique role in assisting students to determine whether or not they have made a good choice on their decision to enroll. Perhaps, too, completion of a course in and of itself is not sufficient reward to inspire students to continue. A pat on the back or a timely "well done" during the course of studies may go a long way in reinforcing students to continue.

4.3 Loss of contact with students is another problem. We recommend that a system should be devised which keeps track of the frequency of communications flow from student to NZTCI and periodic follow-ups should be made when the period exceeds a certain determined point (perhaps 10 weeks, since this is the maximum time permitted for students to return written work on assignments). If students had a grace period and some prompting, (through incentives, reminders or encouragement) they may be motivated sufficiently to pick up their studies again. To cut communications with them almost certainly means to lose them as students. The following student, a 36-year-old branch manager of a retail store, would be very receptive to encouragement:

> "I am quite satisfied with NZTCI. The only reason I temporarily discontinued my assignments was because I have moved into a new job and it had taken time to settle down. However, I intend to finish my five remaining assignments and sit the two papers at the end of the year to complete my NZIM Diploma."

Other students could have been assisted, such as a 26-year-old sales company manager, who spent 12 months in Los Angeles, California, during which time he withdrew from NZTCI management studies. He appeared to need the pressure of deadlines and prodding to continue his studies:

> "After returning from 12 months overseas, I decided it was better to attend a regular class at a technical institute which made me feel more obliged to attend and keep up, rather than putting off until another week, etc. Some sort of compulsory time limit on returning assignments — maybe even with a penalty in marks for lateness — would have helped me continue my studies. This could even contribute to the final NZIM mark."

4.4 Of those 30 percent of the students who had overseas trips during their NZTCI studies, quite a high proportion said that their trips had some impact on their ability to continue their studies. Nearly two-thirds of such students were overseas for at least six months and more than half claimed to be unaware that they could continue their studies whilst absent from New Zealand. Yet students who had overseas trips had lower drop out rates than students who stayed home in New Zealand. We *recommend* that NZTCI could improve its success rate (either/or achievement or persistence) by informing students of their options, whenever unpredictable life events occur and by encouraging them to seek help. While it would be impossible for NZTCI to keep track of the 'comings and goings' of each and every student, a general communication to students to the effect that if something unexpected or unusual happens during the course of her or his studies, NZTCI is prepared to be flexible and responsive in assisting the student to continue his or her studies might do a good bit to encourage students to persist. They need to be encouraged to ask for help, and to be given a fair hearing concerning their problems.

4.5 An encouraging finding in our study was the relatively large proportion of drop out students who indicated that they intended to resume their studies in management at NZTCI again in the future. This suggests that students often have not closed the door to studies, but leave their options open. We *recommend* that NZTCI contact students who have withdrawn (after a period of time to be determined) and inquire if they are ready to re-enroll, offering assistance if that is their desire. Even such indirect encouragement might be helpful in turning "drop out" into "stop out".

5. *Employer Support*

5.1 We *recommend* that NZTCI might liaise with employers and others in the private sector who have a stake in the better training of management personnel to upgrade the status of the NZIM courses among employers. Students often expressed concern that they didn't know how well the NZIM qualification was regarded in the business and private community. Certainly, the direct efforts of employers to date seemed to have little effect on drop out/ persistence in NZTCI management courses. Work needs to be done in terms of overall, long range effects that an NZIM qualification could have on a student's career. Students need a clear signal that their sacrifice in pursuing management education is appreciated and will be rewarded. Any lesser signal will result in feelings such as expressed by this student:

> "My employer considered my study as a hobby (like pottery) and insisted in encroaching on my personal time (outside of working hours) in order to maintain my new position as assistant accountant" (35-year-old divorced female).

6. *Examinations Support*

6.1 A number of students were critical of the national examination system which constitutes the final phase of their studies. Many felt the examinations should be set more frequently so that the material they had learnt would be fresh in their minds at the time they sat for the exam. No doubt there are good administrative reasons guiding present practice. Yet at least a minority of students felt it was a large enough problem to ask us to assist in correcting what they saw as a flaw. This, of course, lies outside NZTCI's realm of authority. However, communication of student concerns to the proper authorities can be helpful in getting those students a hearing.

Whether or not NZTCI wishes to become more involved in the examination phase of tertiary education is a big question and we cannot offer a simple solution or make a recommendation based on our study. However, we raise the issue because a few students felt so strongly about the subject. For example:

> "By attending a Tech, it is more personal and easier to get into the routine of going. You put things off so as to go. By doing correspondence, you have to be more disciplined and it is far easier to get behind. Due to work and home commitments, I have found it necessary to withdraw from Marketing and only continue with Economics. Whilst I have not done much in Marketing, I find it hard reading and too general. I feel it would make the courses easier, more rewarding and a person more inclined to work if the course/s were internally assessed as it is probably more involved and harder than attending a normal institute" (22-year-old male, bank officer).

7. *Educational Technology Support*

7.1 When one considers the large number of students, the huge volume of mail coming and going, the large staff and busy tutors, and the administrative planning and expertise which is required to keep the NZTCI functioning smoothly, it is difficult to see how more work can be squeezed from an already over-taxed institution. Most communication to and from students is based on the written word. To encourage other forms of communication, such as verbal communication by telephone, may seem ludicrous as there simply are not the resources, the people, or the time. However, we recommend that where possible, tutors and students could be released from some of their writing, so that supplementary, or alternative forms of communication, (which are more effective) can be implemented.

7.2 Dahllof (1986) presented a simple three phase description of distance education. Phase one ("presentation") involves the planning, staffing, preparation of written materials, the distribution system for sending and receiving materials, etc. It is an institutionally-orientated phase. Phase two involves the students or learners, who study, mentally digest, analyze, interpret, integrate and synthesize the materials. At this phase, there is a considerable degree of independence, but because there is greater variation among the learners in terms of experience, cognitive styles, skills etc., there is bound to be frequent need for clarification, discussion, illustration, debate, trying out of ideas and conclusions, etc. In short, the learner probably will experience a desire, or need to communicate, with the teacher or tutor at some point during the mental digestion phase. This cannot be anticipated during the presentation phase. Phase three, in Dahllof's scheme, is the examination, evaluation and credentialling control phase. During this phase, the learner presents himself, or herself, to the institution and/or the proper educational authorities and demonstrates the products of his, or her phase two learning for judgment and ultimately for a pass/fail decision.

7.3 NZTCI appears to be well-equipped to proceed into the future with phase one tasks. It has a history of success and accomplishment in this area. Phase three rests in the hands of authorities outside NZTCI. Final examinations are conducted by various national bodies such as NZIM. But phase two, the "during study" support system and communication phase between tutor and learner, perhaps, can be improved after a period of small-scale testing and evaluation of results.

7.4 Results from our research study of NZTCI management courses demonstrated that the majority of respondents showed an interest in improving the phase two (during study) communication process with NZTCI through use of seminars and relevant radio and television programmes and limited telephone tutoring. Smaller proportions of respondents who were enrolled in, or who had taken management courses, expressed interest in supplementing their study programme with audio taped materials or replacing written tutor comments with telephone comments. When we cross-tabulated responses to these questions with persistence or drop out of learners from management courses, we found that dropouts expressed more interest in use of these phase two communication media than did persisters (four of the five relationships were statistically significant).

7.5 This suggests that small-scale controlled experiments could be planned. Adams, Bewley and Povey (1985) have noted that research evidence supporting any connection between teaching and learning with the aid of educational technology is sparse. Management course materials could be sent out as usual after students have enrolled. At any appropriate point early in their studies (perhaps after the first assignment script had been returned), students could be contacted by their tutor and asked if they wished to stick to written work or whether they would prefer to try some component of educational media, either as a supplement, or as an alternative to the existing system.

7.6 Our research data suggest the those students who did not have difficulties (and would be likely to persist) would not be as likely to opt for supplementary or alternative approaches. However, students who had experienced trouble in their studies, for whatever reasons, would be more likely to respond affirmatively. These students, we submit, are prone to drop out. Any personalized help which can be given to them at this stage in their studies is likely to pay off in increased participation, enhanced motivation, improved learning, greater satisfaction and reduced drop out rates and improved success rate. In some instances, tutors could be released from their responsibilities to communicate via the written word and therefore would have more time to communicate via the spoken word. In other cases, quick occasional telephone calls could be made just to ask, "How are you getting on?"

7.7 Students also might be encouraged to originate contacts with their tutors, having been coached to explain their difficulties or to pinpoint their questions. Evidently, some students are already ringing their tutors. A 26-year-old male finance investigating officer advised:

> "In my NZTCI study of 'Management Services', I found the quality of assignments and help from my tutor to be most helpful, although I didn't pass the final exam (because of part-time varsity requirements and pressure from my job). My NZTCI tutor was very helpful. I was readily able to ring him as I live in Wellington. I feel it would be useful if NZTCI gave students specific guidelines on how to study NZTCI assignments (i.e., scheduling of time for assignments, note taking on assignments, etc.)"

7.8 Thus, personalized and specific help could be offered and motivation could be stimulated and maintained. We *recommend* that carefully designed and controlled field experiments be conducted into the use of alternative educational media, after suitable tutor training has occurred, and that results be examined carefully to determine whether or not drop out rates would thus be reduced and NZIM qualification completion rates increased. Tutors could be asked for their opinions. Using this kind of empirical evidence NZTCI could determine whether or not it would be advantageous to expand its phase two services to learners with appropriate educational media.

During the field-experimental interim period, there would have to be a reconceptualization of NZTCI's role away from a primary emphasis on delivery systems and information transmission to that, plus a give-and-take communication process with the learner's best interests at heart. Such a transition would incur not only possible benefits, but also costs, of course. Dahllof (1986) points out that some of these costs (beyond financial ones), would involve more demands on staff and tutors' time, increased responsibility, possible divided staff loyalties and so on. Yet, if appropriate trade-offs could be made, and a flexible system devised and operated, and if the results were positive, then the increased satisfaction and enhanced morale might easily compensate for the added complexity of a system which had, at its core, improved human communication.

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APPENDIX A

NZTCI Management Course Information

nzim

QUALIFICATIONS
FOR
SUPERVISORS
AND MANAGERS

THE NEW ZEALAND INSTITUTE OF MANAGEMENT (INC.)

COURSES IN SUPERVISION AND MANAGEMENT

The New Zealand Institute of Management

NZIM was founded in 1946 with the object of increasing the prosperity of New Zealand by the advancement of management knowledge and practice.

In addition to providing membership service and management training to 5000 individual and 1000 company members, the Institute introduced two courses, recognised by both the public and private sectors, to equip students for a career in management. The two courses are:

1. The Certificate in Supervision and Basic Management, which is a prerequisite to obtaining
2. The Management Diploma (Dip Mgt).

The whole course covers the normal progression of a career in business – the introductory and theoretical preparation, the practice of the function and the special problems of overall management. It has been structured with the aim of providing a qualification which is workplace based and is intended as an adjunct to work experience.

Opportunities

There is no minimum education requirement for NZIM courses. This means that the Certificate in Supervision and Basic Management and Management Diploma can be 'second chance' qualifications. However, the high regard accorded these qualifications attracts an increasing number of university graduates. The NZIM Management Diploma course gives thorough practical training, the quality of which is reflected both in the increasing number of candidates, and by their status in the field of industry and commerce.

Examinations Course Outline

Certificate in Supervision and Basic Management

To obtain this Certificate, candidates must qualify in each of the subjects –

- Labour Relations
- Basic Marketing
- Human Resource Development – People at Work
- Resource Management I
- Principles of Organisation

plus any three of –

- Basic Economics
- Financial Services
- Introductory Accounting
- Human Resource Development – Personnel Practice
- Resource Management II

Management Diploma

To obtain the Management Diploma candidates must first obtain the Certificate in Supervision and Basic Management and then all the subjects –

- Finance
- Economic Environment
- Marketing
- Managing People I
- Managing People II
- Planning and Control

Qualification

On qualifying for the Management Diploma candidates are entitled to use the letters "Dip Mgt" after their name.

Length of course

Most students undertake the course part-time, spending two evenings at classes each week plus several hours of private study. There is no time limit for completion of the full Diploma course, but about five years of part-time study is usual – the first two years for the Certificate in Supervision and Basic Management and the next three years for the Management Diploma.

Exemptions

Exemption from the Certificate in Supervision and Basic Management with the exception of the subject Labour Relations is available to University graduates and holders of five-stage New Zealand Certificates, as well as members of several professional organisations. Exemption from individual subjects of the Certificate and Diploma may be granted on the grounds of passes in other equivalent examinations.

Age

For persons over 17 years of age, no formal educational requirements are necessary. Persons under 17 years must first obtain the approval of the National Examinations Committee. Although the average age of candidates is 28, over 7% are over the age of 40, and half of these are over the age of 45.

Tuition

Tuition is available at Technical Institutes and Community Colleges, although not all provide for every subject. For details of your local Institute or College apply to any NZIM Office.

Correspondence courses are provided by the NZ Technical Correspondence Institute; enquiries should be addressed to The Principal, NZ Technical Correspondence Institute, Private Bag, Lower Hutt.

Enrolment

Brochures containing further details of the Certificate in Supervision and Basic Management or the Management Diploma courses, and registration forms, are available from any NZIM office.

Further Information

may be obtained from

National Office
Box 12-148, Wellington Tel 737-063

Auckland Division
Box 26-001, Auckland Tel 686-403

Wellington Division
Box 11-781, Wellington Tel 846-015

Canterbury Division
Box 13-044, Christchurch Tel 792-302

Otago Division
Box 1117, Dunedin Tel 779-277

N.Z. TECHNICAL CORRESPONDENCE INSTITUTE
Wyndrum Avenue, Lower Hutt   Private Bag, Lower Hutt, New Zealand   Phone Wellington 666-189

MANAGEMENT DEPARTMENT
NZIM SUPERVISION CERTIFICATE
1982 ENROLMENTS

The course for the Supervision Certificate will consist of eight "half" modules as follows:

Each of:

01. Introduction to Supervision
02. Staff Development
03. Labour Relations
04. General Administration
05. Elements of Business Law
06. Communication

Any two of:

07. Elementary Economics
08. Basic Statistics
09. Introductory Accounting
10. Business Administration
11. Industrial Administration
12. Retail Administration
13. Credit Administration (not available 1982)
14. Local Authority Administration

Candidates who have already passed subjects towards a Supervision Certificate will be cross-credited in NZIM records.

Students who have sat an NZIM examination and failed in a particular subject will be required to complete all scripts again in that subject, or the equivalent new subjects.

Gradings will be given on your script and will be as follows:

A, B, C } pass gradings

D, E } fail gradings. You must repeat the script or attempt additional questions sent by your tutor.

Students will be required to register with NZIM (fee $7 per subject) to have their gradings recognised by NZIM.

All students for the subjects of the NZIM Supervision Certificate will be assessed on the satisfactory completion of ALL scripts in each subject.

It is recommended that students intending to study Diploma subjects at a later date should select their two optional subjects from:

Elementary Economics
Basic Statistics
Introductory Accounting.

The scripts you will need to complete for each subject are detailed below.

You will receive the first two assignments as underlined below.

Subject	Assignment Code No.	Scripts to Complete
Introduction to supevision	1101	1 2 3 4 5 6 7 8
Staff Development	1102	1 2 3 4 5 6 7
Labour Relations	1103	1 2 3 4 5 6 7 8
General Administration	1104	1 2 3 4 5 6 7
Elements of Business Law	1105	1 2 3 4 5 6 7 8 9
Communication	1106	1 2 3 4 5 6 7 8
Elementary Economics	880	1 2 3 4 5 6 7 8
Basic Statistics	1108	1 2 3 4 5 6
Introductory Accounting	1109	1 2 3 4 5 6 7
Business Administration	1110	1 2 3 4 5 6 7
Industrial Administration	883	2 3 4 5 6 7 8 12
Retail Administration	1112	1 2 3 4 5 6 7 8
Local Authority Administration	1114	1 2 3 4 5 6 7 8 9

Head of Management Department
1 October 1981

APPENDIX B

Part I: Letters

NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH

Education House, 178-182 Willis Street, Wellington, New Zealand
Postal Address P.O. Box 3237, Wellington *Telephone* (04) 847 939 *Cables* EDSEARCH

19 March 1983

Dear Student/Past Student:

The attached questionnaire is concerned with what NZIM students require from TCI courses and why some students withdraw before completing their studies. It is part of a nationwide survey being carried out by the New Zealand Council for Educational Research on behalf of the Technical Correspondence Institute. We expect the results to provide a basis for improving the teaching and learning of NZIM students studying through the the Institute.

We are particularly keen to obtain your responses because your experience as a past or current student will contribute significantly towards clarifying some of the problems being faced in this important area of education and training. The enclosed questionnaire has been carefully developed so that we may obtain all the data essential for the survey while taking as little of your time as possible.

It would be appreciated if you would complete the questionnaire by 18 April and return it to us in the stamped, special delivery envelope enclosed. This will assist us to analyse the questionnaire data promptly, and allow other phases of this research to be carried out. We would also welcome any comments that you may like to offer concerning any aspect of the NZIM courses not covered in the questionnaire. We will be pleased to send you a summary of the questionnaire results if you wish to have one.

You will see a note at the beginning of the questionnaire concerning the confidentiality of your reply. I cannot stress too strongly the importance we attach to this. Our work is dependent on frank and honest replies to our questionnaires and we realise that we can only expect this if we respect your confidence.

Yours sincerely

John E Watson
(Director)

NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH

Education House, 178-182 Willis Street, Wellington, New Zealand
Postal Address P.O. Box 3237, Wellington *Telephone* (04) 847 939 *Cables* EDSEARCH

12 May 1983

Dear

Recently we sent you a questionnaire and stamped addressed envelope designed to tell us why some Technical Correspondence Institute (TCI) students might withdraw from their NZIM studies, but also what might be done to improve the study materials and teaching methods in these courses. So far we have not heard back from you.

We appreciate that your time is valuable, but feel that you have a worthwhile contribution to make through your association with TCI's management study programmes. This is your opportunity to give personal views on many of the issues that concern learning at a distance for management training in this country at present. However, if we are to draw valid conclusions from this survey of NZIM Management Students TCI, we need your response.

If you have mislaid your questionnaire then please contact:

Mr Graham Wagner
P.O. Box 3237
WELLINGTON

Phone: 847 939

Thank you for your cooperation

Yours sincerely

John E Watson
(Director)

NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH

Education House, 178-182 Willis Street, Wellington, New Zealand
Postal Address P.O. Box 3237, Wellington *Telephone* (04) 847 939 *Cables* EDSEARCH

Dear

As you know our Senior Research Officer, Mr Wagner, is trying to discover information about what students studying for an NZIM qualification at TCI think of their study programme. In particular, he is interested in finding out why some students discontinue their studies and what TCI might do to assist them to continue.

His findings will affect the service TCI provides for you and other distance education students in the future. The reliability of those findings as a basis for action is limited by the proportion and the quality of the response which he gets from students who are asked to give their views.

So far we have not heard from you and we are wondering what has happened. Perhaps your questionnaire has been mislaid or lost in the mail - or you may have been away on holiday and returned after the time for sending back the form. Any one of several contingencies may have prevented you from taking part in the survey. It is possible too that the questionnaire may not have seemed to cover the circumstances of your case. If so, it is important that you should tell us.

In any event, we are enclosing another copy of the questionnaire. If you have simply lacked time until now, I am sure you will try to find 20 minutes in your busy schedule to fill it in and drop it in to the nearest mail-box. Most of the questionnaires have been returned. We would very much like to get them all back. Will you help us?

Thank you. We shall look forward to hearing from you.

Yours sincerely

John E Watson
(Director)

encl: 1

Part II: Questionnaire

Survey of Students Taking an NZIM Course Through the Technical Correspondence Institute

Every answer is confidential. Your name is never used for anything other than to post a letter out if there is some query about the questionnaire. Although the questionnaires will be posted out by TCI as part of its mailing programme, the questionnaires are sent back to the New Zealand Council for Educational Research for independent analysis and reporting after which the questionnaires will be destroyed.

New Zealand Council
for Educational Research
1983

Directions for Completing this Questionnaire

1. Most questions can be answered by entering the appropriate numerals in the boxes on the right-hand side of the page. You should enter only ONE numeral in any one box; if there are two boxes, enter one digit in each box:

   (e.g.) $\boxed{0 \mid 6}$ 21 22 or $\boxed{6 \mid 2}$ 23 24

   (Note: The numerals by the boxes relate to computer processing and do not correspond to question numbers.)

2. Do NOT write anything in boxes marked with double lines.

   (e.g.) ⧈ ⧈⧈

3. Other questions can be answered by writing in the space provided.

4. Space has also been provided at the end of the questionnaire for any further comments you may care to make.

Answer as many of the questions as you can and return this questionnaire in the stamped addressed envelope as soon as possible.

Thank you very much for giving your time to this survey. We appreciate your help and will send you a summary of the results when the survey is completed.

If you have any questions about the questionnaire please contact:

Graham Wagner
(Senior Research Officer)
Vocational and Adult Learning Research Unit

NZCER
P.O. Box 3237
Wellington

Phone: 847 939

(Leave this space blank.)

SECTION 1: GENERAL INFORMATION Record 1

1. Your sex? (Enter 1 or 2 in this box) .... ☐ 1

1 = Male
2 = Female

2. Your age?

Years (e.g. 30 years) = 3 0 .... ☐☐ 2-3
Months (e.g. 11 months) = 1 1 .... ☐☐

3. Your ethnic group? (What do you consider yourself to be?)......... ☐ 4

1 = Maori
2 = Pacific Islander
3 = Pakeha/Caucasian
4 = Other: Please state ______________________________

4. Your marital status at present? .... ☐ 5

1 = Single
2 = De facto
3 = Married
4 = Separated/Divorced
5 = Widowed

5. Any dependents? (e.g. children, parents, etc.?) .... ☐ 6

1 = Yes
2 = No

If yes, please give details ☐ 7

____

____

____

6. Which qualifications did you have upon leaving secondary school?

1 = Yes
2 = No

3 years secondary school .... ☐
At least 3 School Certificate passes .... ☐
Endorsed School Certificate .... ☐
6th Form Certificate .... ☐
University Entrance .... ☐
Higher School Certificate .... ☐
Bursary .... ☐
Commercial, secretarial or trade qualification .... ☐ 8-15
Other: Please specify ____________________ ☐ 16

____

____

7. What qualifications (if any) have you acquired since leaving secondary school?

Qualification(s)	Date Completed
____________________	____________________
____________________	____________________
____________________	____________________
____________________	____________________

☐☐ 17-18

SECTION 2: YOUR JOB/WORK COMMITMENTS

8. What is your present job title?

____

____ ☐☐ 19-20

9. Briefly describe the job you do.

____ ☐☐ 21-22

____

____

____

____

10. Are you responsible for supervising or directing staff on a day-to-day basis? .... ☐ 23

1 = Yes 2 = No

If yes, how many staff? (e.g. 82 = 0 8 2)............. ☐☐☐ 24-26

11. How many hours per week do you spend on your main job? .... ☐☐ 27-28

12. If you do any of the following types of work on a regular basis, how many hours per week do you spend?

(a) Shift work .... ☐☐

(b) Overtime .... ☐☐ 29-34

(c) Secondary employment .... ☐☐

13. Do you have any commitments outside working hours (e.g. sports, church or community activities)? .... ☐ 35

1 = Yes 2 = No

If yes, what are these and how many hours per week do you spend on them?

Commitment	Hours per week	
____________	____________	☐☐ 36-37
____________	____________	
____________	____________	☐☐ 38-39
____________	____________	

SECTION 3: REASONS FOR ENROLLING AT TCI

14. (This question only applies to those 30 YEARS OF AGE AND OVER at the time of enrolling at TCI.)

When you enrolled at TCI did you live within 16 kilometres of a technical institute, polytechnic, or community college which offered alternative instruction towards NZIM? .... ☐ 40

1 = Yes 2 = No

If yes, why did you choose to study with TCI? (State only main reasons.) ☐☐ 41-42

____

____

____

15. (This question only applies to those 29 YEARS OF AGE AND UNDER, at the time of enrolment at TCI, and who have AN EXEMPTION from attendance at classes in a local institute.)

What were the grounds (or reasons) on which you were granted exemption? Please specify: ______________________ ☐☐ 43-44

____

____

____

16. Please indicate the importance of each of the following reasons for choosing to study a management course.

1 = Very important
2 = Quite important
3 = Of little importance
4 = Of no importance

(a) My employer required it (e.g. terms of cadetship, etc.) ... ☐
(b) My employer encouraged me (i.e. gave me moral support) .... ☐
(c) My employer paid my fees/books/other expenses .... ☐
(d) My employer gave me time off to study .... ☐
(e) The NZIM qualification leads to a salary increment .... ☐
(f) The NZIM qualification is part of an award provision ...... ☐
(g) The NZIM qualification gives me better career prospects ... ☐
(h) I was influenced by my family, relative, or close friend .... ☐
(i) I beleived that my future career would benefit .... ☐ 45-53
(j) Other reason(s) not covered above:

Please state and indicate level of importance

Reason	Level of Importance
______________	______________________ ☐☐ 54-55
______________	______________________
______________	______________________
______________	______________________ ☐☐ 56-57

SECTION 4: LOOKING BACK OVER THE STUDY PERIOD

17. Please state the expectations you had about your course when you first enrolled.

☐☐ 58-59

18. If your course does/did not match your expectations please explain why.

☐☐ 60-61

19. During the NZIM study period did you experience any:

   (a) change(s) of job and employer .... ☐

   (b) change(s) within job with same employer .... ☐ 62-63

   1 = Yes 2 = No

   If yes for (a) and (b) what were these changes?

   Please state:

   (a)

   ☐☐ 64-65

   (b)

   ☐☐ 66-67

20. While studying with the TCI did you:

1 = Yes 2 = No

(a) Get married/cohabit .... ☐
(b) Get divorced or separated .... ☐
(c) Have children .... ☐
(d) Have dependents come to stay permanently .... ☐
(e) Get seriously ill .... ☐
(f) Get selected for a provincial or national sports team ..... ☐
(g) Have an overseas trip .... ☐ 68-74
(h) Have other distractions from study not listed above.

Please state: ________________ ☐☐ 75-76

____

____

____

____

21. Did the initial enrolment information about TCI study prove to be satisfactory?

1 = Yes 2 = No .... ☐ 77

If 'No' please explain why it was unsatisfactory:

________________ ☐☐ 78-79

____

____

____

22. Is/was the TCI mail delivery system adequate for your needs?

1 = Yes 2 = No .... ☐ 80

If 'No' what changes would you like/have liked?

Please state: ________________ ☐☐ 81-82

____

____

____

23. The mailed assignment turnaround time is/was sufficient for your needs? ☐ 83

1 = Yes   2 = No

If 'No' what is/was the usual period for an assignment to be returned ☐ 84

1 = less than 2 weeks
2 = 2 to 4 weeks
3 = 1 to 2 months
4 = more than 2 months

24. On average how many hours do/did you spend studying and responding to each assignment? ☐ 85

1 = less than 6 hours
2 = 6 to 8 hours
3 = 8 to 10 hours
4 = over 10 hours

25. On average how much time do/did you spend on background reading (or extra study) when answering an assignment? ☐ 86

1 = none
2 = up to 3 hours
3 = 3 to 6 hours
4 = over 6 hours

26. On average how long do/did you take to answer each test paper in an assignment? ☐ 87

1 = up to 3 hours
2 = 3 to 4 hours
3 = 4 to 5 hours
4 = over 5 hours

27. In which subject do/did the assignments take least time?
Please state:

Subject = ______________________________ ☐☐ 88-89

28. In which subject do/did the assignments take most time?
Please state:

Subject = ______________________________ ☐☐ 90-91

29. Are/were the comments returned by tutors of the course assignments generally helpful in each of the subjects studied?

1 = Yes 2 = No

Subject (Please state)

(a) ______________________________ .... ☐
(b) ______________________________ .... ☐
(c) ______________________________ .... ☐
(d) ______________________________ .... ☐
(e) ______________________________ .... ☐
(f) ______________________________ .... ☐ 92-97

If 'No' to any subject then please state what was particularly unhelpful.

Subject(s)	Comments		
1. ____________	______________________________ ______________________________		
2. ____________	______________________________ ______________________________	☐☐	98-99
3. ____________	______________________________ ______________________________		
4. ____________	______________________________ ______________________________	☐☐	100-101
5. ____________	______________________________ ______________________________		
6. ____________	______________________________ ______________________________		

30. The correspondence (i.e. written) assignments should be supplemented with audio taped material?

1 = Yes 2 = No ☐ 102

If 'yes' in what way(s) could audio tapes be used.
Please state any ideas: ______________ ☐☐ 103-104

31. Telephoned comments (on your work) from your tutor rather than written ones would be preferable.

1 = Yes 2 = No ☐ 105

32. A limited amount of telephone tutoring during the TCI study programme would be helpful.

1 = Yes 2 = No ☐ 106

33. Using radio or TV programmes which are relevant to the NZIM course would be a beneficial study aid?

1 = Yes 2 = No ☐ 107

If 'yes' what would be the advantages? Please state:

☐☐ 108-109

34. The opportunity to attend a seminar would assist with NZIM studies.

1 = Yes 2 = No .... ☐ 110

If 'Yes' could you attend a seminar of 2 or 3 days,
at your own expense, if it was one of the following kinds?

1 = Yes 2 = No

(a) Only where it were close to where you lived .... ☐
(b) In Wellington .... ☐
(c) Only if it were in the weekends .... ☐
(d) On if it were during weekdays .... ☐ 111-114

SECTION 5: ATTITUDES TO STUDY AND WORK

INSTRUCTIONS FOR COMPLETING THIS SECTION.

PLEASE READ THIS CAREFULLY

In this section we want to know how you feel about certain things. You will see that there are pairs of words which are opposite to each other in meaning. Between each pair of words are seven numbers. We want you to circle ONE of the numbers between each pair of words to show how strongly you feel one way or the other.

Here is an example: If we wanted to know how you felt about TV programmes, we could do it this way:

I think TV programmes in general are:

Good	1	2	[✓ 3]	4	5	6	7 . .	. Bad
	Very good	Quite good	Fairly good	Unsure	Fairly bad	Quite bad	Very bad	

This would mean that you thought TV programmes were "fairly good".

Now in what follows look at each pair of words and circle ONE number in each row to show how strongly you feel one way or the other. When you have completed one question go on to the next. Complete each line (there are 10) in each separate question.

35. The TCI assignments are/were:

Interesting	1	2	3	4	5	6	7	Uninteresting	☐	
Relevant	1	2	3	4	5	6	7	Irrelevant	☐	
Wordy	1	2	3	4	5	6	7	Concise	☐	
General	1	2	3	4	5	6	7	Specific	☐	
Non-technical	1	2	3	4	5	6	7	Technical	☐	
Long	1	2	3	4	5	6	7	Short	☐	
Up-to-date	1	2	3	4	5	6	7	Out-of-date	☐	
Unreadable	1	2	3	4	5	6	7	Readable	☐	
Organised	1	2	3	4	5	6	7	Disorganised	☐	
Unhelpful	1	2	3	4	5	6	7	Helpful	☐	115-124

Record 2

36. TCI correspondence tuition is/was:

Boring	1	2	3	4	5	6	7	Interesting	☐	
Easy	1	2	3	4	5	6	7	Difficult	☐	
Useful	1	2	3	4	5	6	7	Useless	☐	
Tiring	1	2	3	4	5	6	7	Not tiring	☐	
Friendly	1	2	3	4	5	6	7	Unfriendly	☐	
Frustrating	1	2	3	4	5	6	7	Rewarding	☐	
Pleasant	1	2	3	4	5	6	7	Unpleasant	☐	
Strict	1	2	3	4	5	6	7	Easy-going	☐	
Organised	1	2	3	4	5	6	7	Disorganised	☐	
Hurried	1	2	3	4	5	6	7	Unhurried	☐	1-10

37. Your job while you were studying for an NZIM qualification at TCI is/was:

Boring	1	2	3	4	5	6	7	Interesting	☐	
Easy	1	2	3	4	5	6	7	Difficult	☐	
Useful	1	2	3	4	5	6	7	Useless	☐	
Tiring	1	2	3	4	5	6	7	Not tiring	☐	
Friendly	1	2	3	4	5	6	7	Unfriendly	☐	
Frustrating	1	2	3	4	5	6	7	Rewarding	☐	
Pleasant	1	2	3	4	5	6	7	Unpleasant	☐	
Strict	1	2	3	4	5	6	7	Easy-going	☐	
Organised	1	2	3	4	5	6	7	Disorganised	☐	
Hurried	1	2	3	4	5	6	7	Unhurried	☐	11-20

NOTE: If you are
(1) Still currently studying at TCI, OR
(2) Have completed study for NZIM Supervision Certificate or Diploma, THEN skip to Q46.
Otherwise continue and complete Section 6.

SECTION 6: REASONS FOR WITHDRAWAL/CEASING STUDY AT TCI.

38. How important were the following reasons for your withdrawing from an NZIM course (or subject)? Please complete each box.

1 = Very important
2 = Quite important
3 = Of little importance
4 = Of no importance
5 = Not applicable

(a) Took course/subject(s) for interest only .... ☐
(b) Compulsory change from TCI course to a Day institute course ☐
(c) Voluntarily changed to Day Institute for classroom instruction .... ☐
(d) Went overseas .... ☐
(e) Changed job .... ☐
(f) Lack of time .... ☐
(g) Illness .... ☐
(h) Course (or subjects) too difficult .... ☐
(i) Course/subject material irrelevant/outdated .... ☐
(j) Personal problems .... ☐
(k) General dissatisfaction with correspondence study .... ☐
(l) Unavailability of study materials (i.e. textbooks, other references) .... ☐
(m) Lack of adequate tutor assistance .... ☐
(n) Administrative problems (e.g. posting, etc.) .... ☐
(o) Difficulty of reading materials .... ☐ 21-36
(p) Other factor(s) not mentioned above. Please state:

....

.... ☐☐ 37-38

....

....

39. Please state what circumstances regarding NZIM study at TCI gave you most trouble prior to withdrawing.

☐☐ 39-40

40. Please state what would have helped you to continue your study?

☐☐ 41-42

41. In the past have you ever commenced a course of study (apart from NZIM) from which you had to withdraw?

1 = Yes 2 = No .... ☐ 43

If 'yes' please state the reason(s):

☐☐ 44-45

42. (TO BE COMPLETED ONLY BY THOSE WHO WITHDREW DURING STUDY OF ONE OR MORE SUBJECTS.)

(a) What subject(s) did you complete before withdrawing?

	Subject	Year
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		

46-71

(b) What subject(s) did you withdraw from before completing the appropriate study programme? Why did you withdraw from the subject(s)?

	Subject	Year	Comments
1.			
2.			
3.			
4.			
5.			
6.			

72-83

43. (TO BE ANSWERED ONLY BY THOSE WHO WITHDREW BECAUSE THEY WENT OVERSEAS.)

(a) Did you go overseas on business?
1 = Yes 2 = No .... ☐ 90

(b) Did you go overseas for pleasure?
1 = Yes 2 = No .... ☐ 91

(c) How long were you overseas?
1 = less than 6 months .... ☐ 92
2 = 6 to 12 months
3 = more than 1 year

(d) Did you know you could arrange to continue your studies through TCI while overseas?
1 = Yes 2 = No .... ☐ 93

44. Do you intend to continue your studies for NZIM at TCI in the future?
1 = Yes 2 = No .... ☐ 94

45. Did unhappiness with your employment affect your NZIM studies?
1 = Yes 2 = No .... ☐ 95

If yes, in what way? Please explain:

☐☐ 96-97

SECTION 7: GENERAL COMMENTS

46. Are there any general comments you would like to make about your NZIM study which will aid us in our survey to understand what students require from TCI courses and why some withdraw before completing? ________________________

☐☐ 98-99

Thank you for your time.

(PLEASE RETURN THIS QUESTIONNAIRE IN THE ENVELOPE PROVIDED AS SOON AS POSSIBLE.)

APPENDIX C

Part I: Tables

Key to interpreting the statistical tables on the following pages.

In each row of the main cells the figures represent the following:

Frequency
Expected
Deviation
Cell Chi-square
Percent
Row Percent
Column Percent

Table 1
Dropout By Hrssec

Dropout	Hrssec

Work at a secondary job?

	Yes	No	Total
Persister	31 36.8 -5.8 0.9 4.28 6.51 55.36	445 439.2 5.8 0.1 61.46 93.49 66.62	476 65.75
Dropout	25 19.2 5.8 1.8 3.45 10.08 44.64	223 228.8 5.8 0.1 30.80 89.92 33.38	248 34.25
Total	56 7.73	668 92.27	724 100.00

Statistics for 2-way Tables

Chi-square	2.909	Prob = 0.0881 (two-tailed)
Phi	-0.063	Prob = 0.0440 (one-tailed)
Contingency Coefficient	0.063	

Table 2
Dropout By Ethgroup

Dropout Ethgroup

Which ethnic group?

	Non-responses	1,2,4	3	Total
Persister	3	23	450	473
	.	27.6	445.4	
	.	-4.6	4.6	
	.	0.8	0.0	
	.	3.20	62.59	65.79
	.	4.86	95.14	
	.	54.76	66.47	
Dropout	2	19	227	246
	.	14.4	231.6	
	.	4.6	-4.6	
	.	1.5	0.1	
	.	2.64	31.57	34.21
	.	7.72	92.28	
	.	45.24	33.53	
Total	.	42	677	719
	.	5.84	94.16	100.00

Key to Column Headings:

1, 2, 4 = Maori, Pacific Islander, Other
3 = Pakeha (i.e.Caucasian)

Statistics for 2-way Tables

Chi-square	2.408	Prob = 0.1207 (two-tailed)
Phi	-0.058	Prob = 0.0635 (one-tailed)
Contingency Coefficient	0.058	

Table 3
Dropout By Depend

Dropout Depend

Any dependents?

	Non-responses	Yes	No	Total
Persister	1	246	229	475
	.	255.3	219.7	
	.	-9.3	9.3	
	.	0.3	0.4	
	.	34.17	31.81	65.97
	.	51.79	48.21	
	.	63.57	68.77	
Dropout	3	141	104	245
	.	131.7	113.3	
	.	9.3	-9.3	
	.	0.7	0.8	
	.	19.58	14.44	34.03
	.	57.55	42.45	
	.	36.43	31.23	
Total	.	387	333	720
	.	53.75	46.25	100.00

Statistics for 2-way Tables

Chi-square	2.158	Prob = 0.1418 (two-tailed)
Phi	-0.055	Prob = 0.0709 (one-tailed)
Contingency Coefficient	0.055	

Table 4
Dropout By Household

Dropout Household

No. persons in household?

	Non-responses	1-4	5-9	Total
Persister	1	402	73	475
	.	396.8	78.2	
	.	5.2	-5.2	
	.	0.1	0.3	
	.	55.60	10.10	65.70
	.	84.63	15.37	
	.	66.56	6	1.34
Dropout	0	202	46	248
	.	207.2	40.8	
	.	-5.2	5.2	
	.	0.1	0.7	
	.	27.94	6.36	34.30
	.	81.45	18.55	
	.	33.44	38.66	
Total	.	604	119	723
	.	83.54	16.46	100.00

Statistics for 2-way Tables

Chi-square	1.188	Prob = 0.2737 (two-tailed)
Phi	-0.041	Prob = 0.1369 (one-tailed)
Contingency Coefficient	0.041	

Table 5
Dropout Schqual 2

Dropout Schqual 2

Have a commercial, secretarial or trade qualification upon leaving secondary school?

	Non-responses	Yes	No	Total
Persister	5	60	411	471
	.	66.5	404.5	
	.	-6.5	6.5	
	.	0.6	0.1	
	.	8.39	57.48	65.87
	.	12.74	87.26	
	.	59.41	66.94	
Dropout	4	41	203	244
	.	34.5	209.5	
	.	6.5	-6.5	
	.	1.2	0.2	
	.	5.73	28.39	34.13
	.	16.80	83.20	
	.	40.59	33.06	
Total	.	101	614	715
	.	14.13	85.87	100.00

Statistics for 2-way Tables

Chi-square	2.189	Prob = 0.1390 (two-tailed)
Phi	-0.055	Prob = 0.0695 (one-tailed)
Contingency Coefficient	0.055	

Table 6
Dropout By Gap

Dropout

Gap

What gap between last formal study and NZIM study (in years)?

	None	1-2	3-10	10+	Total
Persister	188 187.4 0.6 0.0 25.97 39.50 65.96	121 108.5 12.5 1.4 16.71 25.42 73.33	102 112.4 -10.4 1.0 14.09 21.43 59.65	65 67.7 -2.7 0.1 8.98 13.66 63.11	476 65.75
Dropout	97 97.6 -0.6 0.0 13.40 39.11 34.04	44 56.5 -12.5 2.8 6.08 17.74 26.67	69 58.6 10.4 1.9 9.53 27.82 40.35	38 35.3 2.7 0.2 5.25 15.32 36.89	248 34.25
Total	285 39.36	165 22.79	171 23.62	103 14.23	724 100.00

Statistics for 2-way Tables

Chi-square	7.365	Prob = 0.0611 (two-tailed)
Phi	0.101	
Contingency Coefficient	0.100	
Cramer's V	0.101	

Table 7
Dropout by Job

Job

Dropout *What type of job?*

	Super-visory	Admin-istrative	Skilled	Sales Person.	Unskilled	Other	Total
Persister	176 188.9 -12.9 0.9 24.55 37.29 61.32	102 88.2 13.8 2.2 14.23 21.61 76.12	99 95.5 3.5 0.1 13.81 20.97 68.28	31 34.9 -3.9 0.4 4.32 6.57 58.49	11 12.5 -1.5 0.2 1.53 2.33 57.89	53 52.0 1.0 0.02 7.39 11.23 67.09	472 65.83
Dropout	111 98.1 12.9 1.7 15.48 45.31 38.68	32 45.8 -13.8 4.2 4.46 13.06 23.88	46 49.5 -3.5 0.3 6.42 18.78 31.72	22 18.1 3.9 0.8 3.07 8.98 41.51	8 6.5 1.5 0.4 1.12 3.27 42.11	26 27 -1.0 .04 3.63 10.61 32.91	245 31.17
Total	287 40.03	134 18.69	145 20.22	53 7.39	19 2.65	79 11.02	717 100

Statistics for 2-way Tables
Chi-square 11.26 Prob < .05 (two-tailed)
Cramer's V = .13

Table 8
Dropout By Hrsshift

Dropout

Hrsshift

Work shift work?

Dropout	Yes	No	Total
Persister	51 57.2 -6.2 0.7 7.04 10.71 58.62	425 418.8 6.2 0.1 58.70 89.29 66.72	476 65.75
Dropout	36 29.8 6.2 1.3 4.97 14.52 41.38	212 218.2 -6.2 0.2 29.28 85.48 33.28	248 34.25
Total	87 12.02	637 87.98	724 100.00

Statistics for 2-way Tables

Chi-square	2.229	Prob = 0.1354 (two-tailed)
Phi	-0.055	Prob = 0.0677 (one-tailed)
Contingency Coefficient	0.055	

Table 9
Dropout By Empchg

Dropout Empchg

Experienced change of job and employer during study?

	Non-responses	Yes	No	Total
Persister	41	98	337	435
	.	110.1	324.9	
	.	-12.1	12.1	
	.	1.3	0.4	
	.	14.94	51.37	66.31
	.	22.53	77.47	
	.	59.04	68.78	
Dropout	27	68	153	221
	.	55.9	165.1	
	.	12.1	-12.1	
	.	2.6	0.9	
	.	10.37	23.32	33.69
	.	30.77	69.23	
	.	40.96	31.22	
Total	.	166	490	656
	.	25.30	74.70	100.00

Statistics for 2-way Tables

Chi-square	5.265	Prob = 0.0218 (two tailed)
Phi	-0.090	
Contingency Coefficient	0.089	

Table 10
Dropout By Manimpg

Dropout Manimpg

How important was the NZIM qualification for your future career prospects?

	Non-responses	1-2	3-4	Total
Persister	29	390 3844.1 5.9 0.1 57.78 87.25 67.24	57 62.9 -5.9 0.6 8.44 12.75 60.00	447 66.22
Dropout	20	190 195.9 -5.9 0.2 28.15 83.33 32.76	38 32.1 5.9 1.1 5.63 16.67 40.00	228 33.78
Total	. .	580 85.93	95 14.07	675 100.00

Key to Column Headings
1-2 = Very , or quite important
3-4 = Of little , or no importance

Statistics for 2-way Tables

Chi-square	1.914	Prob = 0.1666 (two-tailed)
Phi	0.053	Prob = 0.0833 (one-tailed)

Table 11
Dropout By Manimpi

Dropout **Manimpi**

How important to your future career was the NZIM qualification:

	Non-responses	1-2	3-4	Total
Persister	22	429 424.2 4.8 0.1 62.54 94.49 66.93	25 29.8 -4.8 0.8 3.64 5.51 55.56	454 66.18
Dropout	16	212 216.8 -4.8 0.1 30.90 91.38 33.07	20 15.2 4.8 1.5 2.92 8.62 44.44	232 33.82
Total	. .	641 93.44	45 6.56	686 100.00

Key to Column Headings:

1-2 = Very , or quite important
3-4 = Of little , or no importance

Statistics for 2-way Tables

Chi-square	2.429	Prob = 0.1191 (two-tailed)
Phi	0.060	Prob = 0.0596 (one-tailed)

Table 12
Dropout by Rectype

Dropout Rectype

Types of recreational activities outside working hours?

Dropout	Non-respon-ses	Blank 0	1,2,10	3,4,6	5,11	7,8,9	Total
	1	131	139	37	53	115	475
	.	139.3	127.5	42.0	48.6	117.6	
	.	-8.3	11.5	-5.0	4.4	-2.6	
Persister	.	0.5	1.0	0.6	0.4	0.1	
	.	18.12	19.23	5.12	7.33	15.91	65.70
	.	27.58	29.26	7.79	11.16	24.21	
	.	61.79	71.65	57.81	71.62	64.25	
	0	81	55	27	21	64	248
	.	72.7	66.5	22.0	25.4	61.4	
	.	8.3	-11.5	5.0	-4.4	2.6	
Dropout	.	0.9	2.0	1.2	0.8	0.1	
	.	11.20	7.61	3.73	2.90	8.85	34.30
	.	32.66	22.18	10.89	8.47	25.81	
	.	38.21	28.35	42.19	28.38	35.75	
Total	.	212	194	64	74	179	723
	.	29.32	26.83	8.85	10.24	24.76	100.00

Key to Column Headings:

Blank 0 = None
1,2,10 = Sports
3,4,6 = Church, community service organisation, political organisation
5,11 = Hobbies, family commitments at home
7,8,9 = Combinations of two or more of above

Statistics for 2-way Tables

Chi-square	7.570	Prob = 0.1087 (two-tailed)
Phi	0.102	Prob = 0.0544 (one-tailed)
Contingency Coefficient	0.102	
Cramer's V	0.102	

Table 13
Dropout By Evntstdg

Dropout Evntstdg

Have an overseas trip while studying with NZTCI?

Dropout	Non-responses	Yes	No	Total
Persister	37	143	296	439
	.	132.8	306.2	
	.	10.2	-10.2	
	.	0.8	0.3	
	.	21.31	44.11	65.42
	.	32.57	67.43	
	.	70.44	63.25	
Dropout	16	60	172	232
	.	70.2	161.8	
	.	-10.2	10.2	
	.	1.5	0.6	
	.	8.94	25.63	34.58
	.	25.86	74.14	
	.	29.56	36.75	
Total	.	203	468	671
	.	30.25	69.75	100.00

Statistics for 2-way Tables

Chi-square	3.241	Prob = 0.0718 (two-tailed)
Phi	0.069	

Table 14
Dropout By Futexp

Dropout

Futexp
Any expectations about course when first enrolled?

	Non-responses	Grp 1	3,4,9	5,50	8,88	Total
	53	191	127	25	80	423
		.	200.3	111.7	27.7	83.2
	.	-9.3	15.3	-2.7	-3.2	
Persister	.	0.4	2.1	0.3	0.1	
	.	30.56	20.32	4.00	12.80	67.68
	.	45.15	30.02	5.91	18.91	
	.	64.53	76.97	60.98	65.04	
	46	105	38	16	43	202
	.	95.7	53.3	13.3	39.8	
	.	9.3	-15.3	2.7	3.2	
Dropout	.	0.9	4.4	0.6	0.3	
	.	16.80	6.08	2.56	6.88	32.32
	.	51.98	18.81	7.92	21.29	
	.	35.47	23.03	39.02	34.96	
Total	.	296	165	41	123	625
	.	47.36	26.040	6.56	19.68	100.00

Key to Column Headings:

Grp1	Easy, quick or light work; could handle the study involved; enjoyment, interest, challenge, self-improvement, self-esteem, stimulation, rewarding, further knowledge, technical competence.
3,4,9	Course would be hard, take lots of time, difficulty in adjusting; tuition by one tutor, well planned course, quick marking; theoretical support for practice, comprehensive.
5, 50	No expectations; didn't know anything about course.
8, 88	Job promotion; use at work; qualifications.

Statistics for 2-way Tables

Chi-square	9.089	Prob = 0.0281 (two-tailed)
Phi	0.121	
Contingency Coefficient	0.120	
Cramer's V	0.121	

Table 15
Dropout By Matchexp

Matchexp

Course match expectations when first enrolled?

Dropout	Non-responses	1-2	3-7	Total
Persister	216	174	86	260
	.	143.9	116.1	
	.	30.1	-30.1	
	.	6.3		7.8
	.	43.18	21.34	64.52
	.	66.92	33.08	
	.	78.03	47.78	
Dropout	105	49	94	143
	.	79.1	63.9	
	.	-30.1	30.1	
	.	11.5		14.2
	.	12.16	23.33	35.48
	.	34.27	65.73	
	.	21.97	52.22	
Total	.	223	180	403
	.	55.33	44.67	100.00

Key to Column Headings:

1 - 2 = As good, or better
3 - 7 = Different, or worse

Statistics for 2-way Tables

Chi-square	39.811	Prob = 0.0001 (two-tailed)
Phi	0.314	

Table 16
Dropout By Studytime

Dropout Studytime

Average number hours spent studying and responding to each assignment?

	Non-responses	Less than 6	6-8	8+	Total
Persister	7	93	190	186	469
	.	111.7	179.3	178.0	
	.	-18.7	10.7	8.0	
	.	3.1	0.6	0.4	
	.	13.42	27.42	26.84	67.68
	.	19.83	40.51	39.66	
	.	56.36	71.70	70.72	
Dropout	24	72	75	77	114
	.	53.3	85.7	85.0	
	.	18.7	-10.7	-8.0	
	.	6.5	1.3	0.8	
	.	10.39	10.82	11.11	32.32
	.	32.14	33.48	34.38	
	.	43.64	28.30	29.28	
Total	.	165	265	263	693
	.	23.81	38.24	37.95	100.00

Statistics for 2-way Tables

Chi-square	12.728	Prob = 0.0017 (two-tailed)
Phi	0.136	
Contingency Coefficient	0.134	
Cramer's V	0.136	

Table 17
Dropout By Readtime

Dropout Readtime

Average number of hours spent on background reading and extra study when answering an assignment?

Dropout	Non-responses	None	Up to 3	3+	Total
Persister	7	69	309	91	469
	.	84.5	298.7	85.8	
	.	-15.5	10.3	5.2	
	.	2.8	0.4	0.3	
	.	9.94	44.52	13.11	67.58
	.	14.71	65.88	19.40	
	.	55.20	69.91	71.65	
Dropout	23	56	133	36	225
	.	40.5	143.3	41.2	
	.	15.5	-10.3	-5.2	
	.	5.9	0.7	0.7	
	.	8.07	19.16	5.19	32.42
	.	24.89	59.11	16.00	
	.	44.80	30.09	28.35	
Total	.	125	442	127	694
	.	18.01	63.69	18.30	100.00

Statistics for 2-way Tables

Chi-square	10.801	Prob = 0.0045 (two-tailed)
Phi	0.125	
Contingency Coefficient	0.124	
Cramer's V	0.125	

Table 18
Dropout By Testime

Dropout Testtime

Average number of hours spent on answering each test paper in an assignment?

Dropout	Non-responses	Up to 3	3-4	4+	Total
Persister	13	124	161	178	463
	.	135.4	159.3	168.2	
	.	-11.4	1.7	9.8	
	.	1.0	0.0	0.6	
	.	18.32	23.78	26.29	68.39
	.	26.78	34.77	38.44	
	.	62.63	69.10	72.36	
Dropout	34	74	72	68	214
	.	62.6	73.7	77.8	
	.	11.4	-1.7	-9.8	
	.	2.1	0.0	1.2	
	.	10.93	10.64	10.04	31.61
	.	34.58	33.64	31.78	
	.	37.37	30.90	27.64	
Total	.	198	233	246	677
	.	29.25	34.42	36.34	100.00

Statistics for 2-way Tables

Chi-square	4.888	Prob = 0.0868 (two-tailed)
Phi	0.085	
Contingency Coefficient	0.085	
Cramer's V	0.085	

Table 19
Dropout By Mailturn

Dropout Mailturn

Mailed assignment turnaround time sufficient for your needs?

Dropout	Non-responses	Yes	No	Total
Persister	9	397	70	467
	.	389	77.8	
	.	7.8	-7.8	
	.	0.2	0.8	
	.	57.54	10.14	67.68
	.	85.01	14.99	
	.	69.04	60.87	
Dropout	25	178	45	223
	.	185	36.2	
	.	-7.8	7.8	
	.	0.3	1.7	
	.	25.80	6.52	32.32
	.	79.82	20.18	
	.	30.96	39.13	
Total	.	575	115	690
	.	83.33	16.67	100.00

Statistics for 2-way Tables

Chi-square	2.927	Prob = 0.0871 (two-tailed)
Phi	0.065	Prob = 0.0436 (one-tailed)

Table 20
Dropout By Mailtime

Dropout Mailtime

What is the usual period for assignments to be returned?

	Non-responses	Less than two weeks	2-4 weeks	More than 4 weeks	Total
Persister	399	12 10.9 1.1 0.1 9.45 15.58 66.67	56 50.3 5.7 0.6 44.09 72.73 67.47	9 15.8 -6.8 2.9 7.09 11.69 34.62	77 60.63
Dropout	198	6 7.1 -1.1 0.2 4.72 12.00 33.33	27 32.7 -5.7 1.0 21.26 54.00 32.53	17 10.2 6.8 4.5 13.39 34.00 65.38	50 39.37
Total	. .	18 14.17	83 65.35	26 20.47	127 100.00

Statistics for 2-way Tables

Chi-square	9.273	Prob = 0.0097 (two-tailed)
Phi	0.270	
Contingency Coefficient	0.261	
Cramer's V	0.270	

Table 21
Dropout By Leastime

Dropout Leastime

Which subject did assignments take the least time?

	Non-responses	1-6	14	21-26	7-13	Total
Persister	81	224 220.2 3.8 0.1 41.48 56.71 74.42	53 63.6 -10.6 1.8 9.81 13.42 60.92	54 57.8 -3.8 0.2 10.00 13.67 68.35	64 53.4 10.6 2.1 11.85 16.20 87.67	395 73.15
Dropout	103	77 80.8 -3.8 0.2 14.26 53.10 25.58	34 23,4 10.6 4.8 6.30 23.45 39.08	25 21.2 3.8 0.7 4.63 17.24 31.65	9 19.6 -10.6 5.7 1.67 6.21 12.33	145 26.85
Total	. .	301 55.74	87 16.11	79 14.63	73 13.52	540 100.00

Key to Column Headings:

i-6 = Supervisory Certificate core modules
14 = Unable to say; much the same; only took one subject; can't remember, hadn't started
21-26 = Management Diploma subjects
7-13 = Supervisory Certificate elective modules

Statistics for 2-way Tables

Chi-square	15.634	Prob = 0.0013 (two-tailed)
Phi	0.170	
Contingency Coefficient	0.168	
Cramer's V	0.170	

Table 22
Dropout By Mosttime

Dropout Mosttime

Which subject assignments took the most time?

	Non-responses	1-6	21-26	27	7-13	Total
	85	175	73	47	96	391
	.	176.2	74.3	58.2	82.3	
	.	-1.2	-1.3	-11.2	13.7	
Persister	.	0.0	0.0	2.2	2.3	
	.	32.59	13.59	8.75	17.88	72.81
	.	44.76	18.67	12.02	24.55	
	.	72.31	71.57	58.75	84.96	
	102	67	29	33	17	146
	.	65.8	27.7	21.8	30.7	
	.	1.2	1.3	11.2	-13.7	
Dropout	.	0.0	0.1	5.8	6.1	
	.	12.48	5.40	6.15	3.17	27.19
	.	45.89	19.86	22.60	11.64	
	.	27.69	28.43	41.25	15.04	
Total	.	242	102	80	113	537
	.	45.07	18.99	14.90	21.04	100.00

Key to Column Headings:

1-6 = Supervisory Certificate core modules
21-26 = Management Diploma subjects
27 = Unable to say; much the same; only took one subject; can't remember, hadn't started
7-13 = Supervisory Certificate elective modules

Statistics for 2-way Tables

Chi-square	16.519 Prob = 0.0009 (two-tailed)
Phi	0.175
Contingency Coefficient	0.173
Cramer's V	0.175

Table 23
Dropout By Goodtut

Dropout Goodtut

What is your overall evaluation of tutor helpfulness in respect of comments on assignments?

Dropout	0	1	Total
Persister	117 146.0 -29.0 5.7 16.16 24.58 52.70	359 330.0 29.0 2.5 49.59 75.42 71.51	476 65.75
Dropout	105 76.0 29.0 11.0 14.50 42.34 47.30	143 172.0 -29.0 4.9 19.75 57.66 28.49	248 34.25
Total	222 30.66	502 69.34	724 100.00

Key to Column Headings:

0 = Comments unhelpful in at least one module subject
1 = Comments were all helpful

Statistics for 2-way Tables

Chi-square	24.186	Prob = 0.0001 (two-tailed)
Phi	-0.183	
Contingency Coefficient	0.180	

Table 24
Dropout By Audio

Dropout Audio

Should written correspondence assignments be supplemented with audio-taped material?

Dropout	Yes	No	Total
Persister	142 155.35 -13.35 1.15 21.55 31.35 62.83	331 297.65 13.35 .09 47.19 68.65 71.82	453 68.74%
Dropout	84 70.65 13.35 2.52 12.75 40.78 37.17	122 135.35 -13.35 1.32 18.51 59.22 28.18	206 31.26%
Total	226 34.29%	433 65.71%	659

Statistics for 2-way Tables

Chi-square	5.09	Prob < .05 (two-tailed)
Phi	.09	

Table 25
Dropout By Comtel

Dropout Comtel

Would telephoned comments on work by tutor be preferable to written comments?

	Non-responses	Yes	No	Total
Persister	12	85 94.9 -9.9 1.0 12.59 18.32 61.59	379 369.1 9.9 0.3 56.15 81.68 70.58	464 68.74
Dropout	37	53 43.1 9.9 2.3 7.85 25.12 38.41	158 167.9 -9.9 0.6 23.41 74.88 29.42	211 31.26
Total	. .	138 20.44	537 79.56	675 100.00

Statistics for 2-way Tables

Chi-square	4.123	Prob = 0.0423 (two-tailed)
Phi	-0.078	

Table 26
Dropout By Tuttel

Dropout Tuttel

Would a limited amount of telephone tutoring during NZTCI study be helpful?

	Non-responses	Yes	No	Total
Persister	10	241 252.9 -11.9 0.6 35.44 51.72 65.31	225 213.1 11.9 0.7 33.09 48.28 72.35	466 68.53
Dropout	34	128 116.1 11.9 1.2 18.82 59.81 34.69	86 97.9 -11.9 1.4 12.65 40.19 27.65	214 . 31.47
Total	. .	369 54.26	311 45.74	680 100.00

Statistics for 2-way Tables

Chi-square	3.873	Prob = 0.0491 (two-tailed)
Phi	-0.075	

Table 27
Dropout By Seminar

Dropout **Seminar**

Would the opportunity to attend seminars assist with NZIM studies?

Dropout	Non-responses	Yes	No	Total
Persister	13	368 377.9 -9.9 0.3 53.26 79.48 65.25	95 85.1 9.9 1.2 13.75 20.52 74.80	463 67.00
Dropout	20	196 186.1 9.9 0.5 28.36 85.96 34.75	32 41.9 -9.9 2.3 4.63 14.04 25.20	228 33.00
Total	. .	564 81.62	127 18.38	691 100.00

Statistics for 2-way Tables

Chi-square	4.281	Prob = 0.0386 (two-tailed)
Phi	-0.079	

Part II: Figures

Figure 1
Job While Studying Semantic Differential Mean Scores for Dropouts, Persisters

Job while studying for an NZIM qualification at T.C.I. was:

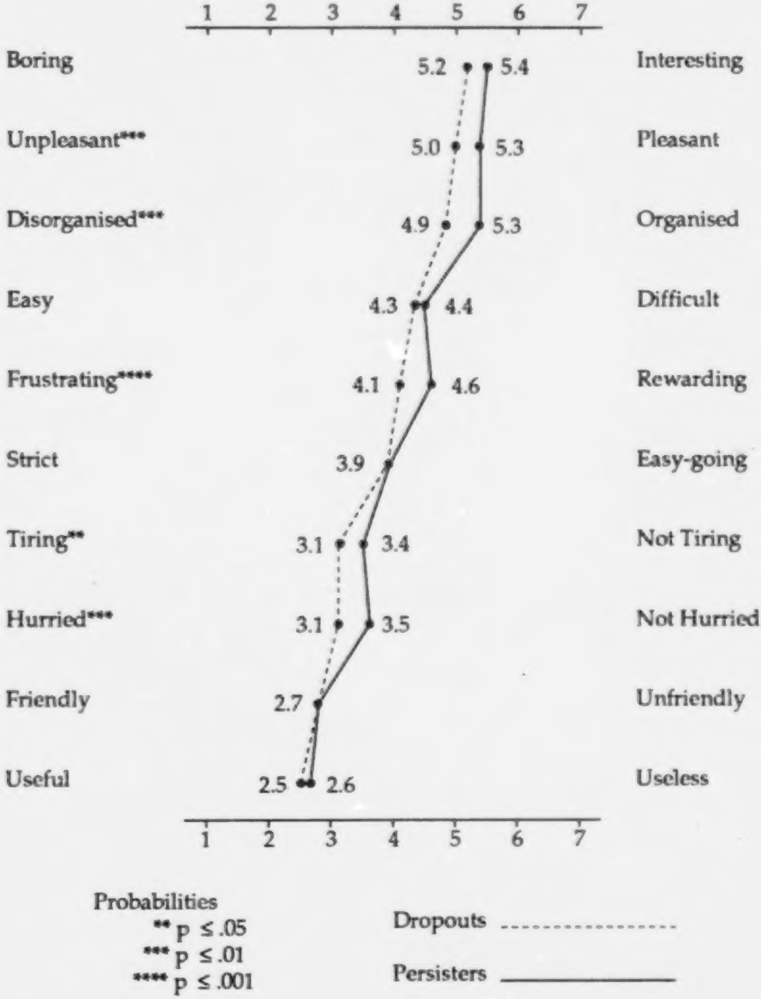


Figure 2
TCI Assignment Semantic Differential Mean Scores for Dropouts, Persisters

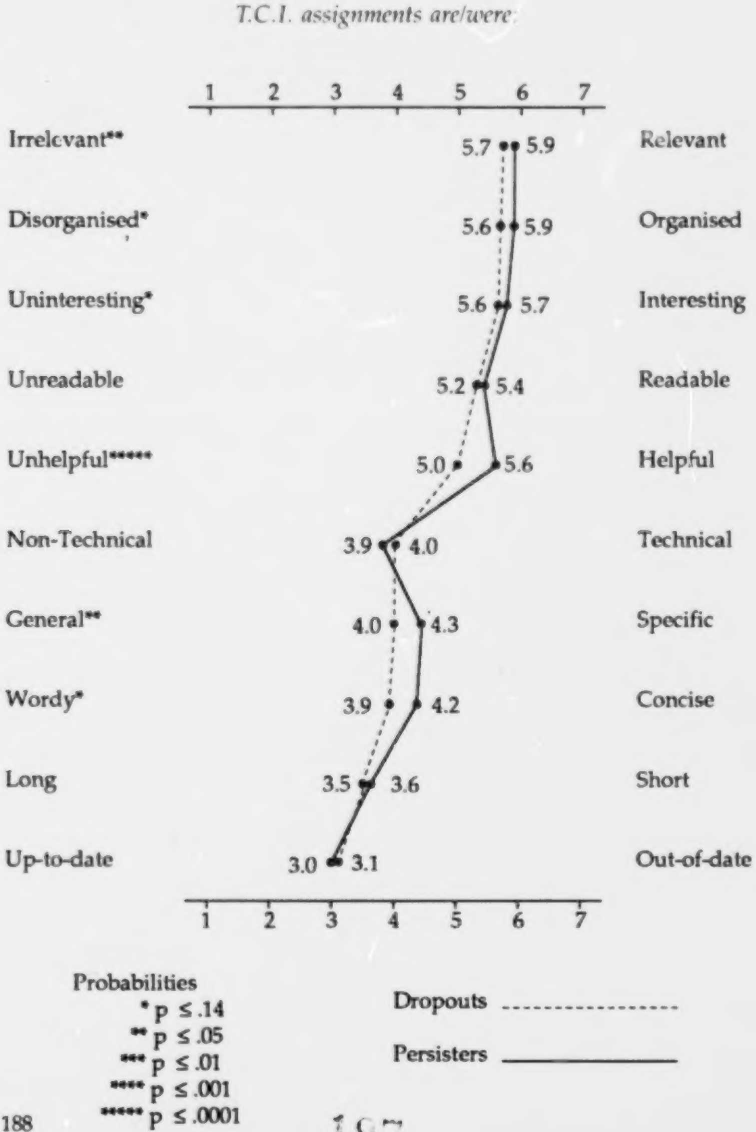
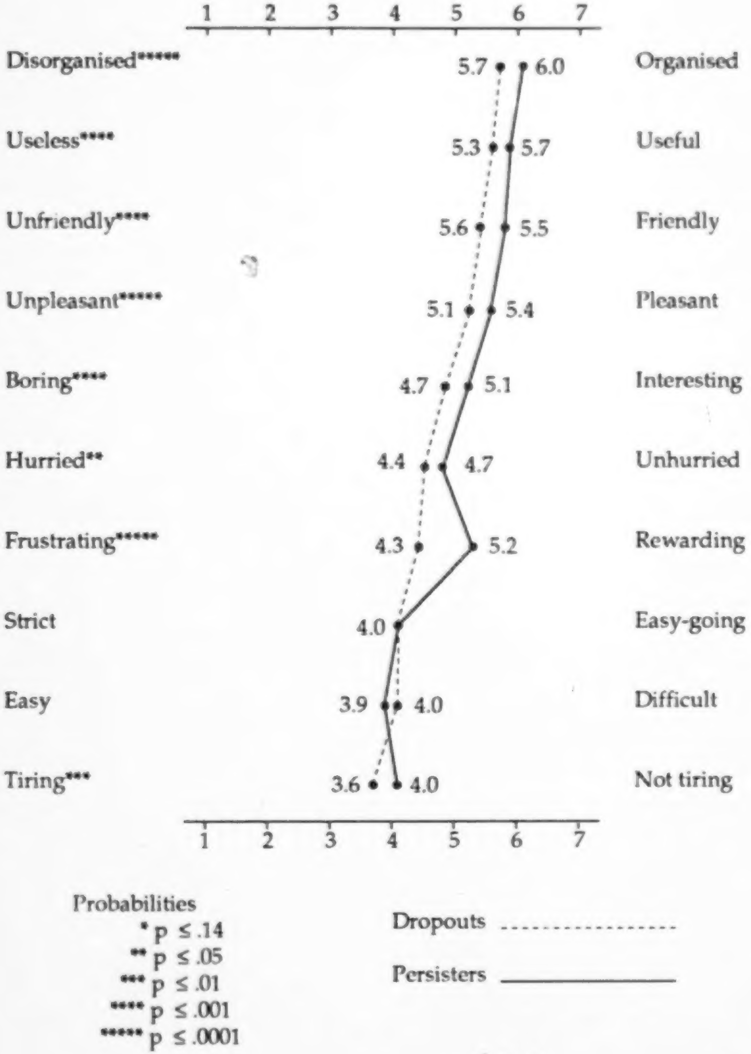


Figure 3

TCI Correspondence Tuition Semantic Differential Mean Scores for Dropouts, Persisters

T.C.I. correspondence tuition is/was:



The Book

The mail survey reported in this book originated out of a concern by senior staff of the New Zealand Technical Correspondence Institute to provide the best and most appropriate kind of correspondence education for students studying for the New Zealand Institute of Management's national examinations. In all, 942 students were surveyed and 724 usable replies enabled information to be provided on the students reason for taking NZIM courses, their views on study methods, satisfaction with tuition, attitudes to alternative educational media, assessment of study materials, and the effects of employment and leisure activities on study performance. An indepth investigation of the characteristics of those who withdrew from their study courses led to the identification of demographic, social interaction, psychological and institutional predictors of dropout and from this predictions were made about likely areas of further research. Recommendations for improving correspondence education courses of the kind produced by NZTCI were included. Two salient features of this publication are its extensive literature review and comprehensive approach to data analysis.

The Authors

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